THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION, HUMAN RESOURCE MANAGEMENT PRACTICES, ORGANIZATIONAL INNOVATION AND MANAGERIAL TIES TO SME PERFORMANCE

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Thesis submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy

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ABSTRACT

Malaysian small and medium enterprises (SMEs) still have not performed to their fullest potential. SMEs have to focus on factors required to improve their performance. Therefore, this study is undertaken to investigate the possible variables that could better explain the performance of SMEs by investigating the relationship between entrepreneurial orientation (EO), human resource management (HRM) practices (i.e. communication and information sharing, compensation, job design, performance appraisal, selection, training and development) and organizational innovation on organizational performance. Specifically, it aims to investigate both the mediating roles of organizational innovation on the relationship between EO and HRM practices towards organizational performance and the moderating role of managerial ties on the relationship between organizational innovation and organizational performance. Resource-based view theory and social capital theory are integrated to explain the possible relationship between the variables in the research model. A total of 321 owners/managers of manufacturing SMEs, representing a response rate of 60.5%, participated in this study. Data was collected via self-administered questionnaires. PLS-SEM was used to analyze the data and test the hypotheses. Statistical results show that EO and certain HRM practices (i.e. communication and information sharing, compensation, performance appraisal, selection, training and development) are positively related to organizational innovation. Organizational innovation is also found to be positively related to organizational performance. Moreover, results reveal that organizational innovation mediates the relationship between EO and certain HRM practices (i.e. communication and information sharing, compensation, performance appraisal, selection, training and development) and organizational performance. However, no empirical support is found for the moderating effect of managerial ties on the relationship between organizational innovation and organizational performance. Finally, theoretical and methodological contributions, managerial implications and recommendations for future research are discussed.

Keywords: Entrepreneurial orientation, human resource management practices, organizational innovation, managerial ties and SMEs' performance.

ABSTRAK

Perusahaan kecil dan sederhana (PKS) di Malaysia masih belum mencapai tahap potensi sepenuhnya. PKS perlu memfokus kepada faktor-faktor yang diperlukan untuk meningkatkan prestasi mereka. Justeru, kajian ini bertujuan untuk mengkaji pemboleh ubah-pemboleh ubah yang lebih baik dalam menerangkan prestasi PKS iaitu menyiasat hubungan antara orientasi keusahawanan (OK) dan amalan pengurusan sumber manusia (PSM) (iaitu komunikasi dan perkongsian maklumat, pampasan, reka bentuk kerja, penilaian prestasi, pemilihan, serta latihan dan pembangunan) dan inovasi organisasi terhadap prestasi organisasi. Secara khususnya, ia bertujuan untuk mengkaji peranan pengantara inovasi organisasi terhadap hubungan antara orientasi keusahawanan (OK) dan amalan pengurusan sumber manusia (PSM). Kajian ini juga mengkaji peranan penyederhana jaringan pengurusan terhadap hubungan antara inovasi organisasi dan prestasi organisasi. Teori berasaskan sumber dan teori modal sosial telah diintegrasikan untuk menerangkan kemungkinan hubungan antara pemboleh ubah dalam model kajian. Seramai 321 pemilik/pengurus PKS dalam sektor pembuatan, yang mewakili kadar respons sebanyak 60.5%, telah menyertai kajian ini. Data telah dikumpulkan melalui kaedah soal selidik yang ditadbir sendiri. PLS-SEM digunakan untuk menganalisis data dan menguji hipotesis. Keputusan statistik menunjukkan bahawa OK dan beberapa amalan PSM (iaitu komunikasi dan perkongsian maklumat, pampasan, penilaian prestasi, pemilihan, latihan dan pembangunan) berkait secara positif dengan inovasi organisasi. Inovasi organisasi juga didapati berkait secara positif dengan prestasi organisasi. Selain itu, keputusan juga menunjukkan bahawa inovasi organisasi menjadi pengantara kepada OK dan beberapa amalan PSM (iaitu komunikasi dan perkongsian maklumat, pampasan, penilaian prestasi, pemilihan, latihan dan pembangunan) dengan prestasi organisasi. Walau bagaimanapun, kesan penyederhana jaringan pengurusan terhadap hubungan antara inovasi organisasi dan prestasi organisasi tidak mendapat sokongan yang empirikal. Akhir sekali, sumbangan kepada teori dan metodologi, implikasi kepada pengurusan serta cadangan untuk kajian akan datang juga telah dibincangkan.

Kata kunci: Orientasi keusahawanan, amalan pengurusan sumber manusia, inovasi organisasi, jaringan pengurusan dan prestasi PKS.

ACKNOWLEDGEMENT

In the name of Allah S.W.T, the Most Gracious and the Most Merciful. All praise to the Almighty, the One who has responded to my prayers in various ways and blessed me with patience, courage, and fortitude throughout this research. I would like to extend my gratitude of acknowledgement and appreciation to my sponsor, Universiti Utara Malaysia (UUM) and the Ministry of Higher Education for supporting and giving me the opportunity to complete my PhD.

This thesis would not have possibly been undertaken without the support and assistance from many people. First and foremost, I would like to express my earnest gratitude to my research supervisors, Professor Dr. Rushami Zien Yusoff and Dr. Nor Azimah Chew Abdullah for their continuous support, patience, motivation, enthusiasm, and immense knowledge. Their guidance has helped me in completing the research and writing this thesis. Without their assistance and dedicated involvement in every step throughout the process, this thesis would have never been accomplished.

I would also like to convey my deepest appreciation to the Dean and School Committee of Human Capital Development, who have continually and persuasively conveyed a spirit of adventure in regard to research and scholarship, and an excitement to research. Without their supervision and constant help this thesis would not have been possible. In addition, I am extremely thankful and indebted to Professor T. Ramayah for sharing his expertise and valuable guidance extended to me. I also would like to thank Professor Dr. Aizzat Mohd. Nasurdin and Dr. Siti Rohaida Mohamed Zainal for their guidance at my earlier stage of the study.

A special love and thanks to my family. Words cannot express how grateful I am to my mother, Hajjah Hamidah Mat, my father, Hj. Zakaria Hj. Mat, my mother-in law, Hajjah Maimunah Hj. Talib, for all of the sacrifices that they have made. Your

prayers for me was what have sustained me thus far. I am forever grateful to all of them. My utmost appreciation is also extended to my family members, my lovely brother and sisters and my in laws, who have given me their prayers and support from the beginning to the end of this lonely journey.

This acknowledgement is not completed without recording my sincere thanks to my close friends who have given me unconditional support: Dr. Norzieiriani, Dr. Lily, Dr. Darwina, Dr. Marlin, Dr. Nazlida, Waida, Munirah, Hanissah, Norzalila, Azrain, Dr. Chandra, Asso.Prof. Dr. Filzah, Dr. Armanurah, Asso.Prof. Hoe and Mathivanan.

Finally and most importantly, I would like to express my deepest gratitude and affection to my beloved husband Hj. Muzammil Hj. Azizan who has spent sleepless nights and has always been my greatest support in moments when there was no one to answer my queries. A special thank also goes to my children, Fathin Nabila, Farisya Nabiha, and Ahmad Fawwaz Nu'man. Thank you very much for providing me with your overwhelming patience, endless love, encouragement, prayers, and inspiration that have greatly facilitated the completion of this challenging study.

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LIST OF ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
AVE	Average Variance Extracted
BNM	Bank Negara Malaysia
Boot CI	Boostrapped Confidence Interval
CB-SEM	Covariance based
CFA	Confirmatory Factor Analysis
CMV	Common Method Variance
CR	Composite Reliability
DOSM	Department of Statistics Malaysia
EM	Estimation Maximization
EO	Entrepreneurial Orientation
ETP	Economic Transformation Program
FAMA	Federal Agricultural Marketing Authority
FMM	Federal of Malaysian Manufacturers
GDP	Gross Domestic Product
GNI	Gross National Income
HRM	Human Resource Management
ICT	Information Communication Technology
MARA	Majlis Amanah Rakyat
MATRADE	Malaysia External trade development Corporation
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
NSDC	National SME Development Council
PLS-SEM	Partial Least Squares Structural Equation Modelling
RBV	Resource-based View
SEM	Structural Equation Modelling
SME Corp. Malaysia	SME Corporation Malaysia
SMEs	Small and Medium Enterprises
SMIDEC	Small and Medium Industries Development Corporation
SPSS	Statistical Package for Social Sciences
VB-SEM	Variance based
VIF	Variance Inflated Factor

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Zakaria, N., Abdullah, N.A.C., & Yusoff, R.Z. (August, 2014). *The Relationship Between Entrepreneurial Orientation and Organizational Innovation In Malaysian SMEs: A Proposed Framework.* Paper presented at The International Conference on Business Management (ICBM) 2014.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Small-and medium-sized enterprises (SMEs) have been identified as one of the growth engines of various countries in the world since they make up over 90 percent of all enterprises. For instance, in the United States 99.7% of all business enterprises are made up of SMEs (Heneman, Tansky, & Camp, 2000), in China 99% (Cunningham & Rowley, 2008), Europe 99% (Rauch & Frese, 2000), Holland 95%, the Philippines 95%, Taiwan 97.8% (Lin & Chen, 2007), and Malaysia 97.3% (National SME Development Council (NSDC), 2012a). The figures above show that many countries all over the world recognize SMEs as a key business sector. Besides, the Asia-Pacific Economic Cooperation (APEC) (2002) pointed out that SMEs are deemed as a supporter to larger enterprises, as well as an important foundation for expanding business activities and sustaining economic growth. SMEs even provide more jobs than large companies (Department of Statistics Malaysia (DOSM), 2007). In sum, SMEs play a vital role to the economy and are likely to be increasingly important as the economy becomes more global.

In Malaysia, SMEs are considered the backbone of industrial development. In the future, SMEs are expected to undertake a bigger role in the economy, not only as an enabler of growth by providing the support to large firms but also as a key driver of economic growth as Malaysia progresses to become a high income nation (NSDC, 2012b). According to the SME annual report 2013/2014 (NSDC, 2014), SMEs have played a significant role in fostering growth, employment and income in Malaysia. In the past 10 years, SMEs have performed well. On average, SME's gross domestic product (GDP) has shown a yearly growth rate of 6.6 percent since 2004, as compared to 3.1% between 2001 and 2003. The rate of growth was higher than the 5% average overall GDP growth of the economy in the same period. In 2013, the performance of SMEs remained favorable when their GDP increased to 6.3%. This increase not only exceeded the 6% growth documented by SMEs in 2012, but also the country's overall economic growth of 4.7%. The growth of SMEs is projected to remain between 5.5% and 6.5% in 2015 (NSDC, 2014).

The existing environment characterized by rapid changes in global businesses and the continuing liberalization pressures occurring from economic and financial crises have provided new challenges as well as opportunities for Malaysian SMEs. To effectively deal with them and to be competitive, SMEs require a new approach by fundamentally shifting from being low cost providers to high value business enterprises. Therefore, the SME Masterplan 2012-2020 introduced in July, 2012 was the ‘game changer’ in directing the new development path for SMEs through all sectors until 2020.

There are four key structural characteristics of SMEs discovered in the SME Masterplan. First, SMEs in Malaysia register low productivity compared to those in the region and more advanced countries. The productivity of SMEs in Malaysia was about one-third of large enterprises in 2010. In fact, when compared to those at the international level, SMEs in Malaysia are far less productive than those in Singapore and the United States, which are four times and seven times more productive, respectively. This shows the significant productivity gap in Malaysia of SMEs.

Second, there is low business formation in comparison to that in high income nations. Generally, a business formation rate reflects the dynamism of the private sector and the level of entrepreneurship in an economy. Among emerging markets, Malaysia was found to be rather high in business formation rates but it was significantly lower than that of high-income countries (NSDC, 2012b). The high rate of business formation involves sole proprietorships and partnerships (86%), which tend to be very small in size and are not exposed much to liability, rather than newly registered companies. This suggests that Malaysia lacks entrepreneurship capabilities.

Third, a small number of firms contributes the most to the economy. Findings revealed that fast-growing firms contributed 70% to the additional GDP and 46% to the additional jobs created during the period 2000-2005. The fastest growing companies that exist in the most competitive sectors suggests that competitive pressures have forced these firms

to innovate and shed outdated technology. However, lacking these features have prevented the growth of SMEs in Malaysia.

Fourth, SMEs have a material share of the informal sector in the economy. The informal sector is estimated to represent about 31% of the Gross National Income (GNI) and usually consists of microenterprises where the owners are self-employed with a very few partners. The informal sector normally does not contribute to GDP and does not even pay taxes. This prevents fair competition and innovation, which dampen the economic growth in Malaysia. In sum, these four characteristics of SMEs signify that these enterprises do not fully exploit their potential in enhancing their competitiveness in order to improve the national economy (NSDC, 2014). Thus, SMEs have to grab these opportunities to search for new ways of doing business and promote the value chain in order to improve their survival and ultimately become global performers. Toward these ends, Malaysian SMEs need a new growth formula that focuses on the internal sources of growth as a means of achieving competitive advantages and consequently improve their performance.

Due to limited analyses of performance over the last decade of the SME sector, only the growth trends from 2005 to 2013 of SME performance can be obtained (refer to Figure 1.1). Even though the statistics show that SMEs account for 97.3% of all enterprises in Malaysia, their contributions to the economy are relatively small compared to large scale

industries (LSIs). A detailed distribution of GDP of SMEs and large enterprises and their percentage share to GDP is shown in Figure 1.1.

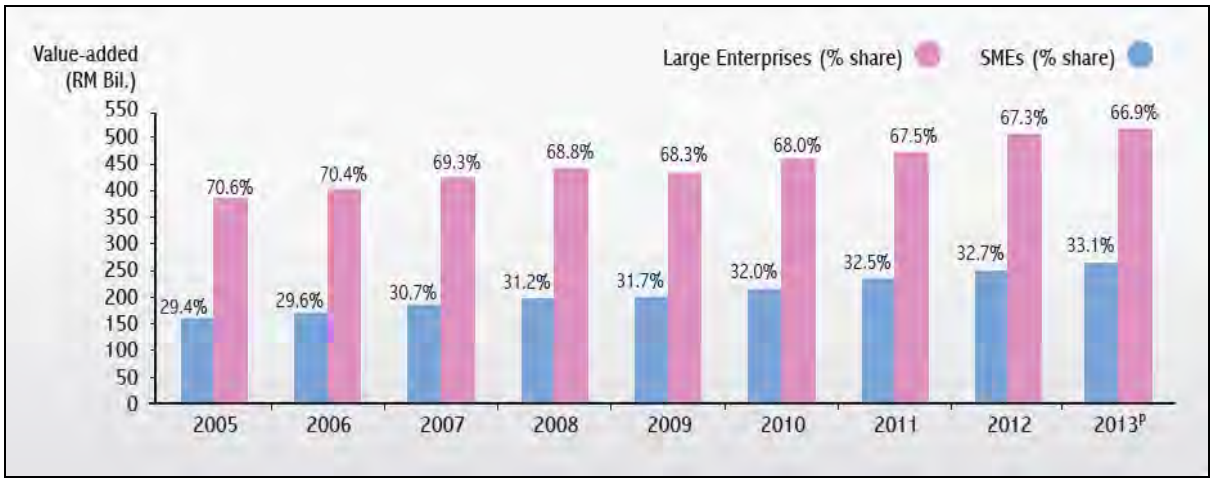

Figure 1.1
GDP of SMEs and large enterprises and their percentage share to GDP (constant 2005 prices), 2005-2013
Source: NSDC (2014)
Note: p: preliminary

The above statistics indicate that the contribution of SMEs is still low and they are yet to reach their full potential. This suggests that further efforts are required to increase the performance of SMEs in order to expand the sources of the national economic growth. The SME annual report 2009/10 also revealed that the contribution of SMEs to the national GDP was also much smaller than that in Japan (53%) in 2007, Germany (53%) in 2008, the UK (51%) in 2008, Korea (49%) in 2007, and Singapore (49%) in 2007 (NSDC, 2010). The contribution of Malaysian SMEs was also lower than that of the neighbouring countries such as Indonesia (57%) and Thailand (38.9%) ("More efforts needed", 2008). The gap between Malaysia and other developed and developing

countries demonstrates that SMEs in Malaysia have not fully utilized the available resources and opportunities to make them more efficient, effective, responsive, innovative, and adaptive to the environment. In other words, in comparison to SMEs in other countries, the performance of SMEs in Malaysia is comparatively poorer.

The question is what kinds of resources and capabilities are needed for SMEs to survive and remain competitive? Perhaps the answer lies in their own competencies particularly their internal resources such as employees, strategies of firm-level entrepreneurship, practices and social support. SMEs have to optimize the used of limited resources in order to become more innovative and competitive (Ngah & Ibrahim, 2009).

1.2 Problem Statement

It has long been acknowledged that SMEs contribute significantly to the overall economic performance in Malaysia. However, as discussed earlier, SMEs in Malaysia are yet to reach their full potential despite making up more than 90% of the total business establishments.

To improve the performance of SMEs, various issues of SMEs need to be analysed. The first issue is on the performance of SMEs in Malaysia is low and less competitive (NSDC, 2014). However, ideally such poor performance should not happen because SMEs receive substantial government support and engage in collaboration with the

private sector through public-private partnership in terms of funding, training, grants, and the provision of consultative services. In 2014, a total of 154 programs that cost a total of RM13.3 billion were implemented to benefit 484,000 SMEs. Most of these programs emphasize four focus areas namely innovation and technology adoption, market access, human capital development, and infrastructure (NSDC, 2014). Despite such support provided to strengthen the competitiveness and agility of SMEs, their performance is below expectation. This indicates that SMEs are not yet ready to compete and relatively less well-resourced (Uden, 2007) to perform well. However, even though employing less advanced management methods than large firms (Leitner, 2001), SMEs have the potential to develop their competitive niche.

A second issue is SMEs have also been very fragile and more vulnerable to the external environment (NSDC, 2012a). During the current global economic and financial crisis and the 2011 catastrophe in Australia, Japan, New Zealand and the United States (US), Malaysian SMEs also indirectly suffered as a result of lower export demand and the slowdown in capital flows that affected investment. As indicated in the SME annual report 2013/2014, following the downturn of the global economic and financial crisis in 2009, SMEs registered a lower growth of 0.2%, which showed a drastic decline compared to four years back when SMEs recorded 6.4% growth in 2006, 10.0% in 2007, and 6.5% in 2008, as illustrated in Figure 1.2 (NSDC, 2014).

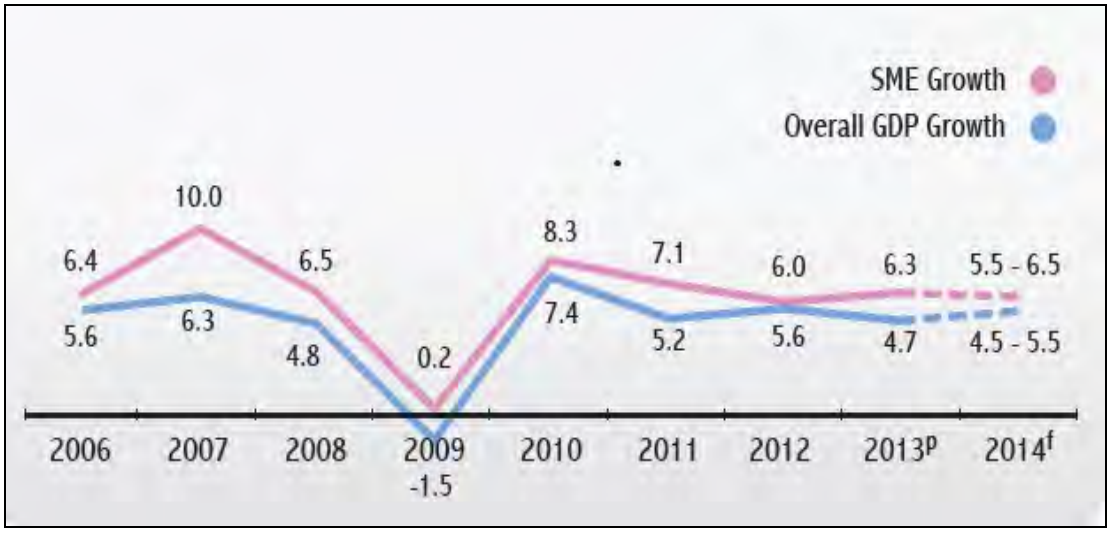

Figure 1.2
SME GDP and overall GDP growth (constant 2005 prices), 2006-2014
Source: NSDC (2014)
Note: p: preliminary; f: forecast

Next issue is on the failure rate of SMEs is extremely high. Firms may fail at different stages. Some fail in their early stages while others fail after a few years of their establishment (Ladzani & Vuuren, 2002). For instance, a study by USA Small Business Administration (SBA,1998 as cited in Beaver, 2002) noted that some 25% of small enterprises failed within two years, and 63% failed within six years. Similar rate of failure was also observed in the UK, the Netherlands, Ireland, Japan, and Hong Kong. Shepherd and Wiklund (2009) also disclosed that almost 50% of new firms survived up to six years and then died off. In Malaysia, the Portal Komuniti KTAK (2006) report revealed that the failure rate among SMEs is as high as 60% (Ahmad & Seet, 2009a), and this figure is considered quite alarming (Jamaludin & Hasun, 2007).

All issues indicate that SMEs suffered from lack of competitiveness, have a long way to being independent as they still rely much on the government support to cope with any possible contingencies in the future especially during the economic crisis. To improve the performance of SMEs, understanding its drivers is crucial. There are six performance levers highlighted in the SME Masterplan 2012-2020. Among them, innovation and technology adoption and human capital development are the most challenging for SMEs (NSDC, 2012b). To be competitive, SMEs have to shift towards higher value added activities and adopt best industry's business practices that will help them prepare for any uncertainties which they are particularly vulnerable to. This transformation requires SMEs to develop their organizational resources and capabilities to make them more competitive, innovative, and technologically strong. Unfortunately, empirical studies on the impact of organizational resources and capabilities of SMEs on their performance, particularly in the Malaysian context, have been less than encouraging. Therefore, empirical work is needed to overcome this shortcoming. Since the effect of organizational factors on organizational performance is approximately twice as much as economic factors (Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997; Wood, 2006), there is a need to further study the former.

The SME Masterplan 2012-2020 has highlighted the role of innovation as the key factor affecting the performance of Malaysian SMEs particularly to drive productivity (NSDC, 2012a). However, comparative studies revealed that the innovation level of Malaysian firms was far below that of the high-income countries and even at par or higher than that

of the middle-income countries (NSDC, 2012b). Despite the implementation of various initiatives to create a national innovation system to facilitate innovation, many SMEs do not participate. SMEs also often lack of management ability and skilled employee, funds, and time to carry out research and development (R&D) activities and product commercialization. Upgraded technology is likewise viewed as a cost instead of an investment which results in poor technology commitment by SMEs (NSDC, 2012b). Hence, to address these constraints, the entrepreneur or owners/managers of SMEs should have the advantage of innovation to compete with larger established businesses in order to succeed in business (Rosenbusch, Brinckmann, & Bausch, 2011).

Human capital development is also critical to the success of any business. Human resources are strategic resources that are important to the organization as knowledge, skills, abilities, behaviors and interaction of the employees have the potential to influence the performance of the organization (Osman, Ho, & Galang, 2011a). Unfortunately, in Malaysia, the labor productivity of SMEs (as measured by real value added per employee) is significantly lower than large companies. In 2011, the average SME productivity was estimated at RM50,498 per employees compared to the average productivity of large firms of RM 140,691 per employee. This was attributed largely to sizeable employment of unskilled employees by SMEs particularly in the labour-intensive industries across all economic sectors (NSDC, 2012a). As reflected by World Bank surveys (NSDC, 2012b), the absence of sufficient skilled employees is a major problem for business operations and growth especially for SMEs in Malaysia. To ensure

the success of SMEs, owners/managers need to retrain and upgrade skills of their employees to enhance competitiveness and productivity. However, to develop such employees, SMEs have to implement an appropriate strategy of human resource management (HRM).

Unfortunately, most HRM theories and literature have been focused on HRM studies in large organizations, and overlooked small organizations (Becker & Huselid, 1998; Huselid, 1995; Jackson & Schuler, 1995; Lado & Wilson, 1994). Similarly, studies on HRM-performance links in Malaysia also focused on large organizations (e.g. Daud, 2006; Hemdi, 2005; Osman, Ho, & Galang, 2011b; A. E. A. Othman, 2009; R. Othman, Abdul-Ghani, & Arshad, 2001; Rowley & Abdul-Rahman, 2007). In addition, findings related to HRM in large firms may not be generalized to SMEs because they have their unique characteristics such as the style of entrepreneurial management, flexibility, informal practices, and competitive strategies (Kwang, Songan, & Kian, 2008). Subramaniam, Shamsudin, and Ibrahim (2011) also argued that the question of the extent of HRM theories being applicable to SMEs is still unclear and previous studies also revealed that the utilization and adoptions of the HRM practices in Malaysia SMEs are still limited (Daud & Mohamad, 2010; Hassan, 2010). While there were local studies conducted among of SMEs, they did not focus on the effect of HRM practices on performance (e.g. Chelliah, Sulaiman, & Yusoff, 2010; Farinda, Kamarulzaman, Abdullah, & Ahmad, 2009; Hashim & Zakaria, 2010; Hilmi & Ramayah, 2008; Jajri & Ismail, 2009; Radam, Abu, & Abdullah, 2008). Thus, it is necessary to undertake HRM

studies in SMEs so that the findings could strengthen the theories in HRM, which include all conditions such as organizational size and structure (Heneman et al., 2000). Such call demands for a shift in focus towards HRM practices in SMEs, since there is limited understanding of the roles of HRM in small and emerging firms (Cardon & Stevens, 2004).

In addition to the specific role of HRM practices, SMEs should engage in entrepreneurship that encourages innovation to remain relevant, competitive, and successful. Generally, the entrepreneurial orientation (EO), has been conceptualized as another predictor of organizational performance (Coulthard, 2007; Covin & Slevin, 1988; Wiklund, 1999). Although the investigation of EO in SMEs is not new, debate remains as to what extent EO affects organizational performance (Covin, Green, & Slevin, 2006). In fact, to the best of the researcher's knowledge, very few studies integrated EO with HRM practices and organizational innovation. For example, Nasution, Mavondo, Matanda, and Ndubisi (2011) revealed that the interaction of entrepreneurship and HRM practices had a significant impact on innovation and customer value. Meanwhile, Kwang et al. (2008) found that HRM practices served as the mechanism through which EO promoted a strong organizational learning capability in Malaysian SMEs. Therefore, there is a need for more research to fill the gaps in the field of HRM and Entrepreneurship (Baron, 2003; Barrett & Mayson, 2006; Katz, Aldrich, Welbourne, & Williams, 2000) particularly in Malaysian SMEs as to motivate their employees to work effectively and thus improve their performance.

Given the importance of organizational resources, such as entrepreneurial orientation (Lumpkin & Dess, 1996) and HRM practices (Abdullah, Ahsan, & Alam, 2009) in the organizational operation and success, there is a need to investigate how HRM practices and the entrepreneurial orientation of the owners/managers can help achieve higher performance and success. The literature clearly shows that HRM practices and EO influence organizational performance, but very little is known about what goes on in the "black box" between these two variables and performance (Becker, Huselid, Pickus, & Spratt, 1997; Wang, 2008). That is, by merely investigating the direct relationship between HRM practices and EO with performance, only partial understanding of performance is obtained (Theriou & Chatzoglou, 2008; Wiklund & Shepherd, 2005) particularly in the context of SMEs. Hence, the researcher wished to investigate the processes through which HRM practices (Becker et al., 1997) and EO (Wang, 2008) impact on organizational performance.

According to prior studies, innovation in an organization is influenced by individual, organizational, and environmental factors. However, nearly all studies have focused on organizational factors as key determinants of innovation (Damanpour, 1991; Kimberly & Evanisko, 1981; Vincent, Bharadwaj, & Challagalla, 2004). Among the organizational factors, human resource management has been shown to be the most significant driver of innovation (Chen & Huang, 2009; Nasution et al., 2011; Tan & Nasurdin, 2010). The HRM practices are capable of providing the needed inputs for innovation, which subsequently improve the performance of an organization (Eisenhardt & Martin, 2000;

Lopez-Cabrales, Perez-Luno, & Cabrera, 2009; Rhee, Park, & Lee, 2010), signifying that innovation could possibly become a mechanism that provides the organizations with a competitive advantage in the market through unique organizational resources (Barney, 1991), namely, HRM practices and EO. Vincent et al. (2004) also noted that very few studies associate innovation with both determinants and outcomes of innovation. To the best of the researcher's knowledge, few studies have examined organizational innovation as the primary mechanism through which the benefits of HRM practice and EO would improve the performance of the organization. Therefore, this study will fill that gap.

Additionally, empirical studies on the innovation-performance linkages have often presented inconclusive findings (Li & Atuahene-Gima, 2001; Vincent et al., 2004; Wolfe, 1994). There are studies that reported positive effects (Keskin, 2006; Li & Atuahene-Gima, 2002; Mavondo, Chimhanzi, & Stewart, 2005), negative effects (Hultink & Atuahene-Gima, 2000; Vermeulen, De Jong, & O'Shaughnessy, 2005) and no effects of innovation on firm performance (Birley & Westhead, 1990; Heunks, 1998). The inconsistent results in innovation-performance studies suggest the existence of contextual moderators (Rosenbusch et al., 2011; Vincent et al., 2004). One of the potential moderators that may influence performance and its determinants is an organizational social capital that is embodied in owner/manager's ties, networks, or contacts with other firms – customers, suppliers, competitors, and other entities (Luk et al., 2008; Stam & Elfring, 2008; Walter, Auer, & Ritter, 2006). Managerial ties or

networks are a source of competitive advantage to the firm (Laere & Heene, 2003) and it is one of the leading factors of business success in Malaysian SMEs (Farinda et al., 2009).

Previous studies have explored the relationship between managerial ties or networking of owners/managers and performance in SME. However, findings have been mixed and lacking in the context of Malaysian SMEs. Some studies showed that managerial ties or networking had a significant direct effect (Acquaah, 2007; Peng & Luo, 2000), a moderate effect (Stam & Elfring, 2008; Walter et al., 2006), and others found a weak effect or no effect (Danis, Chiaburu, & Lyles, 2010; Gronum, Verreynne, & Kastelle, 2012) on profit and productivity growth. Therefore, it is important to integrate managerial ties into the relationship between organizational innovation and organizational performance to understand the potential variation of organizational performance of SMEs.

Literatures indicate that the integrated approach has not been applied since most studies examined the factors that influence the performance of organization separately, e.g., the EO-performance link (Frank, Kessler, & Fink, 2010; Irene, 2006; Rauch, Wiklund, Lumpkin, & Frese, 2009; Wiklund, 1999), the HRM-performance link (Huselid, 1995; Huselid, Jackson, & Schuler, 1997; Wright, Gardner, Moynihan, & Allen, 2005), the innovation-performance link (Rhee et al., 2010; Tajeddini, 2009) and the social capital-performance link (Acquaah, 2007; Peng & Luo, 2000). Therefore, more research are

needed to analyse the integration of organizational resources of SMEs such as EO, HRM practices, organizational innovation, managerial ties, and organizational performance in the same study. Likewise, there has been scarce attention to the mechanism or processes that strengthen the linkage between organizational resources and organizational performance, as well as limited contingent consideration that probably moderates those links.

Drawing from resource-based view (RBV) (Barney, 1991; Wernerfelt, 1984), this study generally aimed to investigate the relationship between entrepreneurial orientation (EO), human resource management (HRM) practices, organizational innovation, and organizational performance. Specifically, this study also examined the mediating effect of organizational innovation on the relationship between EO and HRM practices towards organizational performance, as well as the moderating effect of managerial ties on the relationship between organizational innovation and organizational performance.

1.3 Research Questions

Based on the gaps and unresolved questions in the past literatures, this study soughts to address the following research questions:

1. Does EO have a relationship with organizational innovation?

2. Do HRM practices (communication and information sharing, compensation, job design, performance appraisal, selection and training and development) have a relationship with organizational innovation?
3. Does organizational innovation have a relationship with organizational performance of SMEs?
4. Does organizational innovation mediate the relationship between EO and organizational performance of SMEs?
5. Does organizational innovation mediate the relationship between HRM practices (communication and information sharing, compensation, job design, performance appraisal, selection and training and development) and organizational performance of SMEs?
6. Do managerial ties moderate the relationship between organizational innovation and organizational performance of SMEs?

1.4 Research Objectives

The objectives of this study were:

1. To examine the relationship between EO and organizational innovation.
2. To investigate the relationship between HRM practices (communication and information sharing, compensation, job design, performance appraisal, selection and training and development) and organizational innovation.

3. To assess the relationship between organizational innovation and organizational performance of SMEs.
4. To investigate the relationship between EO and organizational performance through the mediating role of organizational innovation.
5. To investigate the relationship between HRM practices (communication and information sharing, compensation, job design, performance appraisal, selection and training and development) and organizational performance through the mediating role of organizational innovation.
6. To assess the moderating role of managerial ties on the relationship between organizational innovation and organizational performance of SMEs.

1.5 Significance of Study

The present study is significant in two ways; theory and practice.

1.5.1 Theoretical Significance

This study explored at the aspects of organizational resources and capabilities that lead to performance of SME manufacturing companies in Malaysia by using resource-based view as the underpinning theory. Firstly, this study investigated the influence of organizational resources of entrepreneurial orientation, HRM practices, organizational innovation, and managerial ties on organizational performance at the organizational

level of analysis. Organizational innovation was considered a mediator, while managerial ties a moderator. By examining the relationships the present study will provide insights into what contributes to SME performance. Therefore, this study adds new theoretical linkages and empirical evidence on the interaction between organizational variables, such as entrepreneurial orientation, HRM practices, organizational innovation and managerial ties, and organizational performance.

In recent years, there have been calls to do more cross-study researches on the fields of HRM and Entrepreneurship (Baron, 2003; Katz et al., 2000; Tansky & Heneman, 2003). This is because they can benefit greatly from each other as they are closely related (Baron, 2003). The closer link will direct HRM studies to understand what drives entrepreneurial behaviour and how they can help a new business venture. In addition, this relationship may also help researchers understand how HRM theories can be applied to new and smaller firms (Barrett & Mayson, 2007). This is crucial, as clearly indicated by Tansky and Heneman (2003), as SMEs have long been considered a second-rate firms by researchers in the field of HRM.

Many HRM researchers conducted their research on large organizations and disregarded small organizations (Huselid, 1995; Jackson & Schuler, 1995) even though HRM is equally important to smaller organizations. Similarly, in Malaysia, there is also a shortage of studies on HRM in SMEs; so this study is expected to fill the gaps that still exist in the body of literature on the effect of HRM practices on the performance of

SMEs in the manufacturing sector. Therefore, this research would add to entrepreneurship and strategic human resource management literatures. It also contributes toward enhancing our understanding of HRM in entrepreneurial firms.

The role of organizational innovation as a mediator in this study was also examined. Previous studies have revealed that organizational innovation has a direct relationship with performance. However, the understanding of the relationship between the determinants of innovation, the innovation itself, and the outcomes of organizational performance are still lacking (Vincent et al., 2004). Therefore, this study attempted to examine the role of innovation on performance, and empirically test whether organizational innovation acts as a mediator between HRM practices, EO, and organizational performance. This will give a better picture of the role of innovation in influencing organizational performance.

This study also examined the role of managerial ties as a moderator in the relationship of organizational innovation and performance. In innovation research, there have been several attempts to investigate the relationship between innovation and organizational performance, but less consideration on moderating variables has been given. In fact, studies on the innovation-performance relationship have shown inconsistent findings. Thus, by introducing managerial ties as a moderator, this study will contribute to the existing literature of innovation.

Numerous studies have investigated EO, HRM practices, organizational innovation, and managerial ties as predictors of organizational performance (Acquaah, 2007; Frank et al., 2010; Huselid, 1995; Huselid et al., 1997; Irene, 2006; Peng & Luo, 2000; Rauch et al., 2009; Rhee et al., 2010; Wiklund, 1999; Wright et al., 2005). However, to the best of the researcher's knowledge, no single study has simultaneously investigated these organizational resources and capabilities and constructed a multivariate model of organizational performance of SMEs. By considering the organizational resources, the present study offers a unique contribution to the model of organizational performance. Simultaneous investigation of the predictor variables can give information on the relative usefulness, which could probably be very constructive, of the resources particularly in enhancing organizational performance of SMEs.

Finally, this study contributes towards resource-based view theory (RBV) by investigating the effect of organizational resources and capabilities to organization performance of SMEs. The application of RBV is to signify the importance of human resources and organizational resources to achieve performance (Barney, 1991) of SMEs. According to RBV, it is important for firms to manage business processes efficiently and effectively, especially in recognizing the full potential of their resources and capabilities. Thus, from an empirical perspective, investigating the integration of organizational resources and capabilities, such as EO, HRM practices, organizational innovation, and managerial ties in SME manufacturing companies, and assessing the relationships between these variables and performance, will enhance the understanding of

organizational challenges, particularly in dealing with limited resources within a smaller organization.

From the methodological perspective, this study provides empirical evidence of the theoretical linkages between the variables examined. To do so, established measures were adopted and adapted to ensure their compatibility with the context of Malaysian SME manufacturing sector. Furthermore, the PLS-SEM path modelling was used to validate the measures and test the hypothesized linkages among the variables. Systematic assessment of the measures utilized in this study can lead to assist future researchers to produce more reliable and valid measures.

1.5.2 Practical Significance

High performance SMEs benefit not only their owners/managers, but also employees and the whole country. As noted by Wolff and Pett (2006), high performance can improve growth and profits of the firm. When SMEs perform, they can generate jobs and contribute to the national economy. In contrast, low performance indicates slow-moving, or a breakdown of a firm, and hence the destructive economic consequences. So, given the limited resources of smaller firms (Uden, 2007) and their vulnerability to stress, distress, and failure directly related to dynamic environments, there is a need to understand the sources and mechanisms of high performance.

It is expected that the findings from this study will enable the owners/managers of SMEs to understand that HRM acts as an important function in the success of the organization despite being small in size (Tansky & Heneman, 2003). This study is expected to help owners/managers develop strong internal resources and capabilities to suit the competitive business environment through the implementation of HRM policies and practices such as communication and information sharing, compensation, job design, performance appraisal, selecting, and training and development aligned with the business strategies to enhance organizational performance.

Innovation is a driver of success of an organization. Business organizations require innovation to develop and sustain their competitive edge in order to continue to be successful. Organizations that remain within the status quo, without engaging in innovative activities, are not capable of survival in the long run. To survive in the current competitive global business environment, companies have to innovate. This study is expected to assist owners/managers in understanding organizational factors that contribute to innovative capability within the organization, and which in turn lead to improvements in organizational performance. Thus, if a company intends to compete in terms of their capability to innovate, the owners/managers must focus on the practices of human resource management and entrepreneurship orientation strategies. By doing so, a corporate innovative culture can be instituted across all levels in the organization. When this happens, organizational performance will be enhanced and reliance of SMEs on the government support can be reduced to make the organizations more competitive.

Managerial ties in the study act to support innovative activities within the organization for enhanced performance. Ties or networks that exist between organizations can provide essential information such as market situations, strategic locations, social 'ties', and competitors' position for the organization to strategize on how to improve productivity. Through ties and networks, SMEs can become more aware of the existing business opportunities. As such, this study is expected to contribute in helping the owners/managers understand how managerial ties can improve business performance.

1.6 Scope of the Study

This study focused on SMEs in the manufacturing sector. Those SMEs involved in manufacturing, manufacturing-related services and agro-based industries in Peninsular Malaysia were considered. The SMEs in Peninsular Malaysia was chosen due to high concentration of SMEs in Malaysia. Of the 4,784 total SMEs in Malaysia, 4,591 SMEs (95%) registered are located in the Peninsular Malaysia. The manufacturing sector was selected because it employs a large number of employees, which about 50 to 150 employees compared to the service, primary agriculture and information communication technology (ICT) sectors. These sectors were not included because the majority of them comprise small-sized firms, which employ about 5 to 20 employees. This constraint limits the firms from adopting formal and systematic HRM practices. According to NSDC (2012a), the manufacturing sector contributed to the highest growth of 7.6% to SME GDP growth in 2011 in comparison to the agricultural and service sectors (each

6.4%) as well as much higher in average productivity than other sectors (NSDC, 2012b). The manufacturing sector has also shown a track record of continuous business in increased sales (55%) and profit margin (44.9%) during the first quarter of 2014 (NSDC, 2014). The strong performance of SMEs in the manufacturing sector was driven by robust growth of consumer and primary-related cluster industries, namely, food products, clothing and textiles, and construction-related products such as non-metallic, minerals, and fabricated metal products (NSDC, 2012a).

Furthermore, SMEs in the manufacturing sector are more inclined towards innovation particularly in product innovation compared to those in other sectors. This is because the nature of their business and the market dynamics force them to search for new market segments, improve their product quality, and introduce new products (Che-Ha & Mohd-Said, 2012). Bakar (2011) added that, besides sector being engaged primarily in innovation activities, this sector also experienced an upgrade in the manufacturing technology and improvement of product innovation recently.

According to Combs et al. (2006), the effect of HRM practices (in particular, high-performance HRM practices) on the performance of the manufacturing sector almost doubles that in the service sector. This may be because human resources are needed to perform the complicated manufacturing processes and tasks (Lawler, Mohrman, & Ledford, 1995). On the other hand, the services sector tends to have a low level of dependence between employees, high uncertainty of tasks and involves customer

relationship processes. These characteristics may require a different set of HRM practices.

Respondents of this study were the owners/managers who were the top management of a firm. They were considered the representatives of the company and had the most extensive knowledge of the issues under investigation.

1.7 Definition of Key Terms

Some important terms appearing repeatedly in this study are briefly and operationally defined as follows:

1.7.1 Organizational Performance

Organizational performance was defined as the extent to which the owners/managers of SMEs perceive their organizational performance in four dimensions: (a) Satisfaction with financial performance such as profitability, sales turnover, sales growth, return on investment and market share; (2) Satisfaction with non-financial performance such as owner's satisfaction, career progress, customer satisfaction, customer retention, employee satisfaction, relationship with suppliers, business image, workplace industrial relations and work-life balance; (3) Performance relative to competitors in terms of return on sale, cash flow, net profit, market share and return on investment; and (4)

Business growth in terms of changes in sales, market share and cash flow (Ahmad, Wilson, & Kummerow, 2011).

1.7.2 Entrepreneurial Orientation (EO)

EO referred to the extent to which owners/managers of SMEs tend to favour change and innovation with the aim of achieving a firm's competitive advantage (the innovativeness dimension), to engage in business-related risks (the risk-taking dimension), and to compete with other firms aggressively (the proactiveness dimension), which can lead to new entry creation (Covin & Slevin, 1988, 1989; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Miller & Friesen, 1982).

1.7.2.1 Innovativeness

Innovativeness was defined as the extent to which SME owners/managers tend to engage in new ideas, experimentation, and creative processes that are different from the previous working practices by emphasizing R&D, technology, and innovations, which result in the presence of and changes in the new product line (Covin & Slevin, 1988, 1989; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Miller & Friesen, 1982).

1.7.2.2 Proactiveness

Proactiveness was defined as the extent to which SME owners/managers are concerned with the new product introductions and technological capabilities compared to the competitors, and continuously looking for opportunities in the market, besides being the first in entering the market and also in innovations (Covin & Slevin, 1988, 1989; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Miller & Friesen, 1982).

1.7.2.3 Risk Taking

Risk taking was defined as the extent to which SME owners/managers tend to engage in risky projects and seize the opportunity of a new business without knowing the outcome for the organization (Covin & Slevin, 1988, 1989; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Miller & Friesen, 1982).

1.7.3 Human Resource Management (HRM) Practices

HRM practices referred to philosophy, policy, system, and practices that can affect the behaviour, attitudes and performance of employees (Noe, Hollenbeck, Gerhart, & Wright, 2010). Activities of HRM include planning, staffing, training and development, performance management, compensation management, safety and health, and employee relations. HRM practices comprise a combination of practices designed to enhance employee's skills and competence, which ultimately contribute towards improving SME

performance (Guest, 1997; Subramaniam et al., 2011; Vlachos, 2008; Way, 2002). In this study, following Takeuchi et al. (2007) and Agarwala (2003), HRM was conceptualized as a combination of several practices that are systematically designed to be geared towards improving SME effectiveness and yield better performance outcomes. The practices comprise compensation, job design, performance appraisal, selection and training and development, as well as communication and information sharing.

1.7.3.1 Communication and Information Sharing

Communication and information sharing was defined as the extent to which the owners/managers of SMEs perceive that the organization concerns about their employees such as shares information with employees, encourages open and transparent communication among employees, organizes family gathering, provides supportive work environment, appreciates employees' contribution, and ensures fairness in management practices (Agarwala, 2003).

1.7.3.2 Compensation

Compensation was defined as the extent to which the owners/managers of SMEs perceive that the organization has a compensation package that includes extensive benefits, high wages, performance-linked reward system, and ties the intensive system to a skill-based pay (Takeuchi et al., 2007).

1.7.3.3 Job Design

Job design was defined as the extent to which the owners/managers of SMEs perceive that the organization is involved in job rotation, empowers employees to make decisions and designs jobs according to employees' capabilities (Takeuchi et al., 2007).

1.7.3.4 Performance Appraisal

Performance appraisal was defined as the extent to which the owners/managers of SMEs perceive that the organization appraises performance objectively in which the result can be quantifiable. Performance appraisals include management by objective with mutual goal setting that emphasizes feedback on employee development and team performance (Takeuchi et al., 2007).

1.7.3.5 Selection

Selection was defined as the extent to which the owners/managers of SMEs perceive that the organization practices a comprehensive selection process that emphasizes the ability of candidates to collaborate and work in teams, screens job candidates, focuses on selecting the best candidate, emphasizes promotion from within, and prioritizes potential candidates in order to obtain the best employees who can contribute in developing the organization (Takeuchi et al., 2007).

1.7.3.6 Training and Development

Training and development was defined as the extent to which the owners/managers of SMEs perceive that the organization trains and develops its employees continuously and comprehensively, strives to develop firm-specific skill and knowledge, and emphasizes on-the-job experiences in order to develop their employees' knowledge, skills and abilities (Takeuchi et al., 2007).

1.7.4 Organizational Innovation

Organizational innovation was defined as the extent to which the owners/managers of SMEs perceive the process of accepting, adopting and implementing new ideas in the organization. Organizational innovation can product, process, and managerial innovations (Che-Ha & Mohd-Said, 2008, 2012; Damanpour, 1991).

1.7.4.1 Product Innovation

Product innovation was defined as the extent to which the organization has introduced new products and services, modified the existing products and services, opened new markets, has a variety of products and succeeded in developing new products and services compared to its competitors (Che-Ha & Mohd-Said, 2008, 2012).

1.7.4.2 Process Innovation

Process innovation was defined as the extent to which the organization has introduced new elements such as inputs and systems to facilitate the processes of offering products and services. These include new strategies, new ways to finance the business, changes in the organizational structure, use of the latest equipment and software in production process and other activities involved in the production process (Che-Ha & Mohd-Said, 2008; 2012).

1.7.4.3 Managerial Innovation

Managerial innovation was defined as the extent to which the organization has new policies on changing employee attitudes, work practices, human relation practices, rewards distribution and application of good quality practices such as ISO, Good Manufacturing Practice (GMP), Total Quality Management, and quality circle (Che-Ha & Mohd-Said, 2008, 2012).

1.7.5 Managerial Ties

Managerial ties were defined as the extent to which owners/managers of SMEs have utilized social ties, networks, and connections with other managers in their buyer, supplier, and distributor firms, as well as with relevant government officials (e.g., FAMA, MARA, MIDA, or others), SME support institutions (e.g. SME Corp, MITI,

MATRADE, or others) and financial institutions (e.g., SME Bank, Bank Pembangunan, Agro Bank or other financial institutions) (Luk et al., 2008; Peng & Luo, 2000).

1.7.6 SME Manufacturing Sector

SME manufacturing sector referred to firms in the manufacturing, manufacturing-related services and agro-based industries with full-time employees between 5 and not exceeding 150 (NSDC, 2011).

1.8 Organization of the Thesis

This thesis consists of five chapters. In the present chapter, the study background, problem statement, research objectives and questions, significance of study, and definition of key terms are presented. Chapter 2 provides a comprehensive literature review on the predictors of organizational performance and organizational innovation. Discussion on the underpinning theory that contributes to the relationship between HRM practices, entrepreneurial orientation, organizational innovation, managerial ties, and organizational performance are included in this chapter as well. Founded on the literature review, the theoretical framework and research hypotheses are presented at the end of this chapter. Chapter 3 sets the research methodology for this study, which includes the population and sampling design, research instruments, data collection procedures and the statistical methods used in this study. Chapter 4 presents the results

of the study. Finally, Chapter 5 focuses on the discussion of the findings, which includes the implications of the study, limitations and recommendations for future research.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This study investigated the variables related to organizational performance in Malaysian SMEs. This chapter reviewed existing literature on the relationships between entrepreneurial orientation, human resource management practices, organizational innovation, managerial ties, and organizational performance. The purpose is to identify the potential gaps to advance further understanding of the drivers of organizational performance. This chapter commences with the definition, conceptualization, and predictors of organizational performance, followed by a review of research literature on the study variables. To conclude, the underlying theories for this study are presented to exhibit the relationships between the studied variables.

2.2 Small and Medium Enterprises (SMEs) in Malaysia

Based on *The Economic Census 2011: Profile of Small and Medium Enterprises* (SME Census 2011), SMEs in Malaysia represent the majority of the businesses, constituting 97.3% of the total business establishments. They offer employment to about 59% of the total employees and contribute about 32% to the GDP as well as 19% to the total export in 2010. However, SMEs in Malaysia have still a long way

towards achieving the targets set in the SME Masterplan. According to this plan, SMEs are expected to provide 62% of the total employment, 41% of the GDP, and 25% of the total export by 2020 (NSDC, 2012b).

In recognition of the vital role of SMEs in the economy, the Malaysian government has established several platforms to spearhead the development of SMEs in Malaysia. One of those platforms is the National SME Development Council (NSDC), which was established in 2004. The Council serves as the highest policy-making body accountable for delineating the strategies and future direction for the comprehensive and cohesive development of SMEs. Toward this purpose, the Council has adopted a three-pronged strategy aimed at strengthening and enabling infrastructure for SME development, building the capacity and capability of domestic SMEs, and enhancing access to financing by SMEs (Bank Negara Malaysia, 2006).

Bank Negara Malaysia (BNM) as the Secretariat of the Council also facilitates a strong foundation for the development of SME. BNM provides the basic infrastructure and framework to develop the potential and ability of SMEs, as well as to boost financing. A variety of initiatives have been implemented to benefit policy makers and SMEs, such as, improved financing to micro enterprises; enhanced financial advisory services and reorganizing of financing; increased spreading of SME information; coordinated programs of training and marketing; accepted a common SME definition; and developed a comprehensive SME database to inspect the progress and performance of all SMEs (Bank Negara Malaysia, 2010).

In 1996, the Small and Medium Industries Development Corporation (SMIDEC) was established to spur the development of small and medium enterprises (SMEs) by providing infrastructure facilities, financial assistance, advisory services, market access and other support programs. Its aim was to develop capable and resilient Malaysian SMEs to be competitive in the global market. Meanwhile, in 2007, the NSDC decided to appoint SMIDEC as a single dedicated agency to formulate the overall policies and strategies for SMEs, and to coordinate programs across all related ministries and agencies. SMIDEC was transformed into Small and Medium Enterprise Corporation Malaysia (SME Corp. Malaysia) on 2nd October, 2009 (SME Corp. Malaysia, 2010). SME Corp. now becomes a centre and one-stop reference for information and advisory services for all SMEs in Malaysia. One of the core activities of SME Corp. Malaysia is to increase the capacity and capabilities of SMEs so that they can provide world-class services and products to large companies or MNCs and their operations worldwide.

In 2005, the NSDC approved the use of standard definitions of SMEs in the manufacturing, manufacturing-related services, primary agriculture, and services sectors. These definitions are used by all government ministries, agencies and financial institutions engaged in the development of SME. The use of the standard definitions was to strengthen the government efforts in creating effective policies and support programs for specific targets, make it easier to provide technical and financial assistance to SMEs, and allow for the identification of SMEs in the various categories and levels (SME Corp. Malaysia, 2010).

To be defined whether a business enterprise is considered small or medium, one has to consider the category of the business and the size of the business (in terms of total sales revenue/turnover or number of employees). There are two categories of business: (a) manufacturing, manufacturing-related services and agro-based industries; and (b) services, primary agriculture and information & communication technology (ICT). Based on these two criteria, four different quadrants can be identified as shown in Table 2.1. In general, businesses are considered SMEs as long as they meet either the threshold set for annual sales turnover, or in terms of the number of full-time employees (NSDC, 2011). This study used the previous definition of SMEs (2005 – 2013) to represent Malaysian SMEs (NSDC, 2014).

Table 2.1
Definition of SMEs in Malaysia (2005-2013)

Size / **Category**	**Small Enterprise**	**Medium Enterprise**
Manufacturing, manufacturing-related services and agro-based industries	Sales turnover between RM250,000 and less than RM10 million OR Full-time employees between 5 and 50	Sales turnover between RM10 million and RM25 million OR Full-time employees between 51 and 150
Services, primary agriculture and information & communication technology (ICT)	Sales turnover between RM200,000 and less than RM1 million OR Full-time employees between 5 and 19	Sales turnover between RM1 million and RM5 million OR Full-time employees between 20 and 50

Source: SME Annual Report 20013/2014 (NSDC, 2014)

2.3 Definitions of Organizational Performance

Organizational performance is probably the most complex and subjectively described phenomenon. It becomes the most extensively studied as a dependent variable in organizational studies (Brewer & Selden, 2000; March & Sutton, 1997) because it is concerned with effectiveness, productivity, efficiency, or excellence. The performance of an organization is an area of a particular interest to stakeholders including owners, investors, suppliers and employees (Madrid-Guijarro, Auken, & García-Pérez-de-Lema, 2007) because strong performance supports growth and profitability of the organizations. When a firm performs well, it means that the stakeholders will benefit, as well as the surrounding community, particularly through the attraction of resources and employment opportunities. In contrast, low-performing firms are often not competitive enough and have financial problems that can lead to stagnation or failure (Madrid-Guijarro et al., 2007). Therefore, an inspection of a firm performance is needed in light of environmental changes and uncertainty. This is because gaining a good understanding on how SMEs achieve high performance will have significant implications for SME owners/managers, SME employees and the economy where the SME operates (Wolff & Pett, 2006).

A measurement of performance enables a firm to take appropriate action and make any changes to the strategic orientation to ensure the firm will survive (Chan, Qi, Chan, Lau, & Ip, 2003; C. Parker, 2000). As a result, many researchers are interested in measuring performance theoretically and practically (Henri, 2004). According to Parker (2000), organizations measure their performance for reasons that may differ

among organizations. Among the reasons is to identify success, to ensure customer needs are met, to help understand the organization processes, to identify problems and actions to overcome those problems, to ensure decisions are made based on facts, and to indicate the improvement of performance.

There is no universal definition of performance (Anderse´n, 2010), and no agreement on the most suitable indicators of small firm performance (Minai & Lucky, 2011 ; Wiklund, 1999). Performance from the process perspective involves the process of transformation from inputs to outputs in order to accomplish specific results, whereas from an economic perspective, performance is focused on efficiency and effectiveness of the organization in managing cost and outcome (Chien, 2004; Jarad, Yusof, & Shafiei, 2010). In sum, organizational performance can be defined as the ability of an organization to utilize their available resources efficiently and effectively in order to achieve the desired goals (Jarad et al., 2010).

According to Venkatraman and Ramanujam (1986), organizational performance consists of three domains: (a) financial performance; (b) business performance; and (c) organizational effectiveness. However, most strategic studies focused only on the first two domains. The financial performance domain makes use of simple outcome-based financial indicators (e.g., sales growth, profitability, earnings per share, market or value-based, market-to-book or stock-market returns, Tobin's Q) that reflect the accomplishment of the firm's economic goals. Meanwhile, business performance stresses on indicators of operational performance (e.g., nonfinancial) in addition to financial performance indicators. Sttudies that emphasized the operational

performance domain focused on key operational success factors that may lead to financial performance. Such indicators include market-share, new product introduction, product quality, marketing effectiveness, manufacturing value-added, technological efficiency, and so forth.

Many factors are used as the determinants of organizational performance. Brewer and Selden (2000) identified agency-level factors and individual factors that might affect agency performance, while Lenz (1981) highlighted the following factors that explain organizational performance factors: environmental factors, structure factors, administration factors, environment and structure factors, strategy and structure factors, and environment and strategy factors. Hansen and Wernerfelt (1989) found that both economic and organizational factors were significant determinants in organizational performance. Kalleberg and Leicht (1991) examined the individual factor (gender) contributions in organizational success and survival. In general, the higher the performance of an organization, the higher the quality of the products and services that will be produced by the organization (Brewer & Selden, 2000). The following discusses measures of organizational performance.

2.4 Measurement of Organizational Performance

One of the key issues in the investigation of performance in an organization is measurement (Lewin & Minton, 1986; Venkatraman & Ramanujam, 1986) so that the survival, success, and development of the organization will continue. But

measuring performance of an organization is not a straightforward issue. There are many approaches to measuring performance, as shown below.

2.4.1 Financial and Nonfinancial Measurement

Choosing a measurement of organizational performance is a challenge (Venkatraman & Ramanujam, 1986) because it plays a key role in constructing the strategies of an organization. Fundamentally, the measurement can be financial or non-financial. The financial measurements have traditionally been used as the key measurement of organizational performance. According to Ittner and Larcker (2000), financial measurements measure the company's direct or indirect financial profitability, earnings, and accounting returns. For example, Dess and Davis (1984) evaluated performance by using annual sales growth and rates of return on assets (ROA); Hansen and Wernerfelt (1989) used the five-year ROA; Peng and Luo (2000) used two types of financial measurements i.e. ROA and market share; and Youndt, Subramaniam, and Snell (2004) used ROA and ROE.

Meanwhile, non-financial measurements are related to customers, employees, or any other related individual's satisfaction, innovation and quality in the business environment (Ittner & Larcker, 2000). The measurements can also be integrated with the financial data to predict the future profitability, competitive strength, and long-term strategies in enhancing organizational performance (Venkatraman & Ramanujam, 1986). In this area, Kalleberg and Leicht (1991) utilized organizational survival and organizational success (CO's gross earning) to measure performance;

Hurley and Hult (1998) evaluated organizational outcomes, which were the capacity to innovate and competitive situation advantage; Mazzarol (2003) measured employee turnover, employee productivity and employee commitment; and Jimenez-Jimenez and Cegarra-Navarro (2007) used four basic models of non-financial measurements in estimating organizational performance. They were human relations, rational goal, internal process, and open system.

2.4.2 The Integrated Measurements

Instead of evaluating performance by using only the financial or non-financial measurements, recent studies have combined both measurements to maximize the factors that increase an organization's performance. For example, Tvorik and McGivern (1997) evaluated rates of return on sales (ROS), Altman score, and rates of return on invested capital (ROIC) for the economic factor variables, and rates of ROA and rates of return on investment (ROI) for the organizational factor variables. Lewin and Minton (1986) also suggested using aggregate measures such as sales profit, ROI, ROA, ROIC, and others. Hansen and Wernerfelt (1989) measured industry profitability, relative market share, and firm size for the economic factors, and human resources and goal accomplishment for measuring the organizational factors.

Meanwhile, Brewer and Selden (2000) used six Merit System Protection Boards (MPSB) Merit Principles Survey questionnaire to measure the agency-level and individual factors, whereby it included items on job-related attitudes and behaviour,

agency characteristics, and the new agencies support for the National Performance Review (NPR). The study concluded that the measurement variables that achieved a significant value in organizational performance were efficacy, teamwork, building human capital, structure of tasks, employees' protection, public interest concerns, and task motivation.

Within the context of SMEs in Malaysia, the integration of the financial and non-financial measurements can give a comprehensive overview of organizational performance since the measurement supplements each other (Walker & Brown, 2004). These measurements can identify the critical success factors that are commonly used by local and international SMEs (N. H. Ahmad, Wilson, & Kummerow, 2011). Furthermore, Ahmad and Seet (2009b) identified the financial and non-financial measurements used in Malaysia through the lens of SME founder-managers. Researchers found a linkage between financial and non-financial measurements in determining organization's success and survival (G. S. Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997) and there are many studies that used the integrated measurements to measure performance (e.g., N. H. Ahmad et al., 2011; Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009; Stam & Elfring, 2008; Way, 2002; Wiklund & Shepherd, 2003).

However, some have questioned the suitability of financial measurements of SMEs performance. This is because most of the financial statements provided by the SMEs are not audited; so the data cannot be trusted. In addition, accounting information is likely to be modified in accordance with management decisions (S. Ahmad, 2010b).

Besides, public information is not reliable as the actual performance of SMEs is usually not well documented. This is because most SMEs are private firms and have no legal obligation to disclose their financial and accounting information. Thus, respondents may not want to disclose the actual financial data (Davis, Bell, Payne, & Kreiser, 2010; A. R. Othman, 2007). So, to avoid the difficulty in obtaining the relevant data, previous researchers used subjective or perceptual performance judgments. Management perceptions about concepts such as effectiveness and performance are actually more valid indicators than objective data. Thus, self-reported measures may, in certain cases, represent more precise and flexible and thus more useful explanations than objective measurements, especially in the context of SMEs (S. Ahmad, 2010b; Davis et al., 2010; Morgan & Strong, 2003; A. R. Othman, 2007; C. Subramaniam, Shamsudin, & Ibrahim, 2011; Vlachos, 2008, 2009). Accordingly, several studies have also found a strong correlation between objective and subjective measurements (Davis et al., 2010; Morgan & Strong, 2003). Subsequently, based on the above discussion, the researcher decided to measure organizational performance by using the perception of owners/managers instead of the actual indicators such as financial performance indicators.

Therefore, within the context of this study, and following Ahmad, Wilson, and Kummerow (2011), this study conceptualized organizational performance as the extent to which owners/managers of SMEs perceive their organizational performance in four dimensions, namely, (1) Satisfaction with financial performance such as profitability, sales turnover, sales growth, return on investment and market share; (2) Satisfaction with non-financial performance such as customer satisfaction, customer

retention, relationship with suppliers, business image, workplace industrial relations and work-life balance; (3) Performance relative to competitors in terms of return on sale, cash flow, net profit, market share and return on investment; and (4) Business growth in terms of changes in sales, market share and cash flow.

Next, to further understand the concept of organizational performance, the following sections discuss its determinants.

2.5 Determinants of Organizational Performance

Earlier studies have shown that economic factors and organizational factors are the leading research streams related to organizational performance in business policy (G. S. Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997). Economic factors emphasize the market factors in determining organizational success and survival (e.g., industry variables, market share and firm size), while organizational factors deliberate on the behavioral and sociology paradigms within the business environment (e.g., goal emphasis and human resources). However, some researchers found that the organizational factors are more important in influencing organizational performance than the economic factors (G. S. Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997).

Other than the organizational and economic factors, many other factors have been considered such as individual factors. Individual factors, such as employees and leadership-apprentice attitudes, behavior and other self-changes and improvement,

have been empirically shown to influence performance (Brewer & Selden, 2000; Judge, Thoresen, Bono, & Patton, 2001; Kalleberg & Leicht, 1991; Kim, 2005; Podsakoff & MacKenzie, 1997). These factors are described below.

2.5.1 Organizational Factors

Organizational factors have been found to be more significant than other factors in influencing organizational performance (G. S. Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997). The following discusses some of the organizational factors (variables) that are important in influencing organizational performance.

2.5.1.1 Organizational Structure

Organizational structure relates to the hierarchical framework in an organization, which is the allocation and arrangement of its lines of authority or work roles from the top to the bottom (Child, 1972). The structural choice and structural arrangement influence the effectiveness of an organization. They predict the decision making that will be affected; the market strategies, cost determination, opportunities seized, and others. In other words, an organization needs an effective organizational structure to maximize its performance. Other than structure, Hansen and Wernerfelt (1989) added the organizational systems and practices (characteristics of communication flow, human resource practices, decision-making practices, organization of work, job design and goal emphasis) that are closely integrated into an organizational structure.

The organizational structures, system and practices have been shown proven to be related to organizational performance (G. S. Hansen & Wernerfelt, 1989).

2.5.1.2 Organizational Capabilities and Learning

Organizational performance is also determined by its capabilities and learning. Organizational capabilities and learning involve the capabilities of the employees (individual factors), information systems, time and budget planning, and customer market requirements (Tvorik & McGivern, 1997). Three prominent factors in organizational capability suggested by organizational change, learning and decision-making studies are the inter-organization relationship and action implication awareness, motivation and organizational capabilities to accelerate action (Tvorik & McGivern, 1997).

2.5.1.3 Organizational Resources

Efficient and well-managed organizational resources imply organizational performance in a business (Tvorik & McGivern, 1997). The major resources in an organization are human resources, financial resources, physical resources, and information resources, used to accomplish organizational goals. That is why the resources can be used to predict performance. Furthermore, in a competitive business environment, the resources are needed for both quantity and diversity. Resource allocation and strategic are connected (Chrisman, Bauerschmidt, & Hofer, 1998; G.

S. Hansen & Wernerfelt, 1989) because the allocation of the resources is a starting point for initiating the strategies.

According to Brewer and Selden (2000), humans are the most important resource that can impact organizational performance. They mentioned how important human resources management (HRM) is and how effective HRM improves organizational performance. HRM includes human capital recruitments, employment process, sufficient training and staffing practices.

2.5.1.4 Organizational Culture

Brewer and Selden (2000) stated that organizational culture (psychology, attitudes, norms, experiences, beliefs, values, and rituals empowerment in an organization) plays a prominent role in enhancing performance. They stated four cultural beliefs required in an organization, namely, valuing the employee's opinion, promoting the spirit of teamwork, promoting cooperation, and encouraging the public interest. The organizational culture relates to the foundation of shared understanding and meaning in the organization. Previous studies have found the significance of culture in influencing performance (Homburg & Pflesser, 2000; Sorensen, 2002).

2.5.1.5 Leadership and Supervision

Leadership and supervision impact the workplace environment, which influences organizational performance (Brewer & Selden, 2000). Good leadership suggests the

presence of a caring, informal, and politically savvy leader. Basically, leadership and supervison is more likely than individual factors, which emphasize the characteristics, behavior and attitudes of an individual (Kim, 2005; Podsakoff & MacKenzie, 1997). It concerns the individual quality from the top to the bottom of an organization. Relating to leadership and supervision, it is well said that the better leader and supervision facilitate a higher level of organizational performance.

2.5.2 Individual Factors

Besides organizational structures (e.g., the characteristics of communication flow, human resource practices, decision-making practices) (G. S. Hansen & Wernerfelt, 1989), organizational resources (e.g., human, financial, physical and information resources) (Tvorik & McGivern, 1997), Brewer and Selden (2000) also stressed the importance of individual factors in enhancing organizational performance. They proposed four individual-level key factors that affect performance, namely, structure of task/works, task motivation, public service motivation and individual performance. Kim (2005) suggested an individual-level factor and organizational performance theoretical model, which highlights four variables: job satisfaction, organizational commitment, public service motivation, and organizational citizenship behaviour (OCB). Meanwhile, Podsakoff and MacKenzie (1997) emphasized the importance of OCB in improving the effectiveness or performance of the organization. Some of the variables are further discussed below.

2.5.2.1 Organizational Citizenship Behaviors (OCB)

OCB concerns with individual behavior (included in the work duties) in an organization that represents the contributions supported by the formal reward system (Kim, 2005; Podsakoff & MacKenzie, 1997). OCB includes job duties of helping, sportsmanship, civic virtue, promoting a positive environment, avoiding unnecessary conflicts, and active in organizational activities etc. Podsakoff and MacKenzie (1997) argued that OCB increases organizational performance because enhances it employees and personal productivity. It also frees other resources for productivity purposes. For instance, helpfulness between the employees relieves the manager's involvement so that he can concentrate on other tasks. OCB also reduces maintenance needs and improves organizational abilities, stability and abilities in adapting to environmental changes.

2.5.2.2 Job Satisfaction

According to Judge et al. (2001), job satisfaction is related to the affective responses towards the diversity of job tasks. Kim (2005) stated that job satisfaction is positively correlated with job-related variables such as organizational involvement, commitment, mental health, individual job performance, and motivation.

2.5.2.3 Organizational Commitment

Organizational commitment identifies the involvement of a person within his or her organizational activities/tasks and environment (Kim, 2005). Previous studies found that commitment to the organization affected organizational effectiveness (Angle & Perry, 1981; Brewer & Selden, 2000).

2.5.2.4 Motivation

A high performance organization normally has highly motivated employees to attain organizational goals. Brewer and Selden (2000) believed that intrinsic motivation is important for task completion. It motivates individuals to finish their tasks passionately and whole-heartedly. In reviewing motivation literatures, Kim (2005) described the importance of public service motivation (PSM). PSM motivates individuals to perform public services. Individuals with higher PSM are involved in many public organizations, which results in increased organizational performance. Brewer and Selden (2000) also of the view that PSM is important in work-related attitudes and behaviour such as achievement, commitment, satisfaction, trust, and others.

2.5.2.5 Individual Performance

According to Brewer and Selden (2000), individual performance of each employee is more likely to influence organizational performance because for an organization to

perform highly it requires employees to complete tasks or other related activities. Kalleberg and Leicht (1991) also agreed that the performance of an organization is closely related to the individual's abilities, motivations, and trust. They showed that although men dominated the business field, women's business can equally succeed and survive like men's.

2.5.3 New Venture Factors

Besides organizational factors and individual-level factors, new venture factors were also considered in this study as a determinant of organizational performance. Literatures indicate that new venture determinants significantly contribute to enhancing new businesses' performance (Chrisman et al., 1998). A new venture is commonly related to a new business that concentrates on profit and growth by developing, producing and marketing its products or services. Sandberg and Hofer (1987) described some factors that help a new venture to be successful and survive. They are entrepreneur, industry structure, business strategy, resources and organizational structure, systems and processes. These factors are discussed below.

2.5.3.1 The Entrepreneur

The entrepreneur plays an important role in a new venture. Past studies suggested that skills, experiences, and values are required for the success and survival of the organization (Chrisman et al., 1998). Strategies and resource selection usually emanate from the behavior and decisions of the entrepreneur, suggesting the

importance of individual factors in the entrepreneurship environment (Brewer & Selden, 2000; Kim, 2005; Podsakoff & MacKenzie, 1997). Chrisman et al. (1998) proposed that an entrepreneur should have positive personality characteristics (confidence, high-motivation, risk-taking, and others), values and beliefs (power, status, contribution to society, wealth and security), skills (communication, financial, personal, interpersonal, personnel, and others), experiences and education (formal education, industry experience, and others) and behaviour (flexibility, organizing, problem analysis) to be successful.

2.5.3.2 Business Strategy

Business strategy concerns the strategies involved in competing with other competitors in the business environment (Chrisman et al., 1998). The strategies include planning and strategy formulation (planning efforts, quality, rationale of the decision, and others); goals and objectives of the profitability and market share; strategy direction; entry strategy (new products, franchising, or others); competitive weapons (innovation, cost, differentiation from competitors, and others); scope of the strategy within the products, services, customers and technologies; investment strategy, and lastly, the political strategy between competitors, customers, government, suppliers and stakeholders (Chrisman et al., 1998; Sandberg & Hofer, 1987). In measuring organizational performance, Rose et al. (2008) stressed the value of manufacturing strategies for ensuring the capabilities to perform in the competitive environment. they found that cost-based strategy greatly influenced

organizational performance instead of other strategies, such as, quality-based, flexibility-based and speed-based strategies.

2.5.3.3 Resources

Resource factors have also been discussed widely in enhancing a new venture business performance. Sufficient use of resources is important for profitability, market and network. Chrisman et al. (1998) argued the significance of tangible and intangible assets in helping a business. While tangible resources include capital, land, facilities, credit, equity, equipment and labour, intangible resources are like patents, reputation, skills (Bakar & Ahmad, 2010), strategic location (Christensen & Drejer, 2005), networks (Gronum, Verreynne, & Kastelle, 2012), culture, licence, and others. According to Tvorik and McGivern (1997), for the resources to be helpful in increasing organizational performance, they must have competitive significance for the competitors, sometimes unique to the business, not widely identified within the business environment, have a unique path of history, and cannot be easily acquired by the competitors. Furthermore, they contended that the availability of more resources than the competitors provides better business opportunities and hence better performance.

2.5.3.4 Organizational Structure, System and Process

Organizational structure, system and process (OS) are some of the primary factors that need consideration. The OS basically necessitates some strategies to be

executed, which involve choosing and constructing task divisions, coordinating and integrating functions, information flow simplicity, recruitment managing, training, motivating and supporting positive behavior among the employees (Chrisman et al., 1998). A new venture requires a variety of structures, processes, and systems to enhance its performance. They also stated that organizational performance relies on the congruence of its structure, system, and process. It is the central principle of the strategic management theory.

There are various factors that influence organizational performance including organizational factors, economic, individual, and new business performance. However, in this study, the researcher did not address all of these factors. Rather, the researcher focused on specific organizational factors that determine organizational performance, which are discussed next.

2.6 Variables Related to this Study

Since the effect of organizational factors on organizational performance is approximately twice as much as economic factors (G. S. Hansen & Wernerfelt, 1989; Tvorik & McGivern, 1997; E. H. Wood, 2006), there is a need to further study the organizational factors. This study applied resource-based view as the theoretical underpinning, in which Barney, in his seminal work (1991), explained that organizations have a bundle of resources that can be utilized effectively and efficiently in order to produce a competitive advantage, which can lead to higher organizational performance. Since the objective of this study was to investigate the

role of EO, HRM practices, organizational innovation, and managerial ties towards organizational performance, the other factors discussed earlier will not be reviewed. Thus, the following sections will discuss in detail these variables study.

2.6.1 Entrepreneurial Orientation (EO)

2.6.1.1 Definition and Conceptualization of EO

Literatures on entrepreneurship indicate that entrepreneurial orientation (EO) is a primary factor in achieving firm success (Lumpkin & Dess, 1996; C.L. Wang, 2008). According to Helm, Mauroner, and Dowling (2010), EO is important as the foundation for an entrepreneur to play their key roles in entrepreneurship, such as an idea generator, internal entrepreneur, project leader, technological gatekeeper, and project sponsor. They also argue that EO reflects the basic orientation of the entrepreneur and the new spin-off venture. Covin and Slevin (1988, p. 218), emphasized EO as the innovativeness, proactiveness and risk taking of a firm. It demonstrates the "extent to which top managers are inclined to take the business-related risks, in favouring changes and being innovative, in order to obtain a competitive advantage for their firm, and compete aggressively with other potential competitors."

Lumpkin and Dess (1996, p. 136) defined EO as "the processes, practices and decision-making entrepreneurial acts of managers that lead to new entries". They defined entrepreneurship as a 'new entry' and explained the role of EO in the new entry. Basically, a new entry is the act of entering and setting up new ventures or

markets, whether it is totally in a new setting, or from existing firms (Certo, Moss, & Short, 2009). Dess and Lumpkin (2005) defined EO as the strategic practices used by organizations in acknowledging and running new businesses. However, according to Chang, Lin, Chang and Chen (2007), many studies used the EO definition given by Lumpkin and Dess (1996). Other terms used for EO include entrepreneurship (Miller, 1983), corporate entrepreneurship (Barringer & Bluedorn, 1999; Dess, Lumpkin, & McGee, 1999; Zahra, 1993; Zahra & Covin, 1995), intrapreneurship (Carrier, 1996; Kuratko, Montagno, & Hornsby, 1990), entrepreneurial posture (Covin & Slevin, 1988) and entrepreneurial strategy-making (Dess, Lumpkin, & Covin, 1997).

The idea of proposing EO was based on strategic management theories and literature, which stress on the strategic choice perspective and concentrate on a new entry development (Certo et al., 2009; Child, 1972; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996). Here, EO highlights the intentions and actions of an entrepreneur in aiming for a new entry creation. Rauch, Wiklund, Lumpkin, and Frese (2009) considered EO as a firm-level process of strategy making that is used to achieve the company's goals and vision, and build competitive advantages.

Building upon the prior studies by Mintzberg (1973), Khandwalla (1977) and Miller and Frisen (1982), Miller (1983, p. 771) proposed three dimensions of EO, namely, innovation, proactivenesss and risk taking, based on his description that an entrepreneurial firm "engages in product market innovation, undertakes somewhat risky ventures, and it is first to come out with proactive innovations, beating

competitors to the punch…" He emphasized that the dimensions are complementary to each other, and represent a primary uni-dimensional construct. Lumpkin and Dess (1996) stated that innovativeness refers to the tendency of a firm in developing new ideas, novelty, inventions, experimentations, and creative processes, which affect latest products, services, and technological practices progression. Meanwhile, proactiveness was defined as the pioneering or initiative nature of firms as a method to compete aggressively with other competitive firms (Miller, 1983). Basically, a proactive firm will be the first in entering a new market and new product introduction, in view of the strategic planning of the future opportunities that had earlier been initiated by them (Certo et al., 2009; Dess & Lumpkin, 2005). Risk taking refers to a firm's tendency in engaging with risky projects and starting a new venture although its influences, impact, and successfulness are unknown (Certo et al., 2009; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996). It is the willingness of an entrepreneurship to utilize as well as to allocate more resources to a project without knowing the outcome for the company (Wiklund & Shepherd, 2005).

Lumpkin and Dess (1996) extended the dimensions of EO by including two more dimensions: competitive aggressiveness and autonomy. Competitive aggressiveness refers to a firm's tendency to intensely and directly outperform its rival to enhance its market place situation (Certo et al., 2009; Lumpkin & Dess, 1996). Meanwhile, autonomy is the abilities of an individual or team, for self-directed and autonomous action in bringing out a vision or idea, and then endeavoring to complete it (Lumpkin & Dess, 1996). Despite the inclusion of two additional dimensions, many studies utilized the three dimensions of EO proposed by Miller (1983) as the key to the

firm's success and survival (Aloulou & Fayolle, 2005; Green, Covin, & Slevin, 2008; Kreiser & Davis, 2010; Morris, Coombes, Schindehutte, & Allen, 2007; Renko, Carsrud, & Brännback, 2009; Richard, Barnett, Dwyer, & Chadwick, 2004; Wiklund & Shepherd, 2005). This is because Lumpkin and Dess's (1996) competitive aggressiveness was found to be conceptually overlapped with the proactiveness dimension. On the other hand, there were debates as to whether autonomy is a contextual variable that enables entrepreneurial behavior as well as it was closely related to proactiveness and innovativeness (Kreiser & Davis, 2010; Kuratko, Ireland, Covin, & Hornsby, 2005; Morris et al., 2007). Hence, in light of the debates, the present study considered the three dimensions of EO, i.e. proactiveness, innovativeness and risk-taking dimensions to be consistent with many researchers (e.g. Davis et al., 2010; J. D. Hansen, Deitz, Tokman, Marino, & Weaver, 2011; Kreiser & Davis, 2010; Perez-Luno, Wiklund, & Cabrera, 2011; Rauch et al., 2009; Rhee, Park, & Lee, 2010; Tang, Kreiser, Marino, Dickson, & Weaver, 2009).

Consequently, following previous scholars, this study conceptualized EO as the extent to which owners/managers of SMEs tend to favour change and innovation with the aim of achieving a firm competitive advantage (the innovativeness dimension), to engage in business-related risks (the risk-taking dimension), and to compete with other firms aggressively (the proactiveness dimension), which can lead to a new entry creation. The following discusses these three dimensions in detail.

2.6.1.2 Dimensions of EO

2.6.1.2.1 Innovativeness

One of the key ingredients in characterizing EO is innovativeness (Miler, 1983; Lumpkin & Dess, 1996; Chadwick et al., 2008). According to Lumpkin and Dess (1996), Schumpeter (1934) was the first to highlight the innovation role in the entrepreneurial process through his discussions of the model of "creative destruction". The model explains that entrepreneurial firms need to take the opportunity to engage in innovation activities through the activities of "new combination." The "new combination" reflects introducing new products, new methods of production, penetrating new markets, discovering new sources of raw material, and developing new firms in the industry (S. Ahmad, 2010a). Consistently, previous researchers have also considered innovativeness as an important part of entrepreneurial orientation at the firm level (Covin & Slevin, 1988, 1989, 1991; J. D. Hansen et al., 2011; Lumpkin & Dess, 1996; Miller, 1983; Rauch et al., 2009; Wiklund & Shepherd, 2005)

According to Covin and Slevin (1988, p. 218), EO is a multi-dimensional construct of innovativeness, proactiveness and risk taking. It demonstrates the "extent to which top managers are inclined to take the business-related risks, in favoring changes and innovation, in order to obtain a competitive advantage for their firm, and compete aggressively with other potential competitors". The dimension of innovativeness has been theorized by Covin and Miles (1999) as the most critical component in describing entrepreneurship. Innovativeness is defined as the single common theme

that underlies all components of corporate entrepreneurship (Covin & Miles, 1999). They also felt that without denying the existence of the other components of the EO, these components could be predictors, or outcomes, or have a relationship with innovation. Nonetheless, they contended that "without innovativeness, there is no corporate entrepreneurship regardless of the presence of these other dimensions" (Covin & Miles, 1999, p. 49).

Lumpkin and Dess (1996) referred to innovativeness as the propensity of a firm in developing new ideas, novelties, inventions, experimentations, and creative processes, which affect latest products, services, and technological practice progression. It reflects the entrepreneurial business owners in shaping their businesses in terms of its susceptibility, engaging in experimentation, supporting new ideas, and deviating from conventional practices resulting in innovative behavior in organizations (J. D. Hansen et al., 2011). An innovativeness orientation suggests that the individual has a positive mindset with regards to new ideas pertaining to products, services, administration, or technological processes (Krauss, Frese, Friedrich, & Unger, 2005). Thus, following previous scholars (e.g., Covin & Slevin, 1988, 1989; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996; Miller & Friesen, 1982), this study conceptualized innovativeness as the extent to which SMEs owners/managers engage in new ideas, experimentation, and creative processes that may lead to new products, and thereby differs from previous working practices. Innovativeness includes the tendency of owners/managers to emphasize R&D, technology, and innovations, as well as the presence of any changes in the new

product line. Innovativeness is concerned with finding solutions to problems and needs in creative ways (Covin & Slevin, 1989).

2.6.1.2.2 Proactiveness

Over the years, economic scholars have stressed the consequence of a proactive nature in the entrepreneurial process (Lumpkin & Dess, 1996; Miller, 1983; Wiklund & Shepherd, 2005). Earlier research works (e.g. Covin & Slevin, 1988, 1991; Miller, 1983; Mintzberg, 1973) and later studies (e.g. Kreiser & Davis, 2010; Lumpkin & Dess, 2001; Rauch et al., 2009; Wiklund & Shepherd, 2005) have considered the proactiveness influence in EO. Miller (1983) argued that proactiveness is the pioneering or initiative nature of firms as a method to compete with other competing firms aggressively. Pursuing and seeking new opportunities and thoroughly investigating new chances in the marketplace has a valuable impact on entrepreneurship as it determines the effectiveness of a business (Lumpkin & Dess, 1996). Lumpkin and Dess (1996, p. 146) added that proactiveness in EO is crucial because "it suggests a forward-looking perspective that is accompanied with the innovation activities" in an organization. Kreiser and Davis (2010) also emphasized that firms need to be aggressive and proactive to ensure the success and survival of their firms.

In order to succeed, several researchers suggested that a firm must be the first mover before their competitors (Dess & Lumpkin, 2005). Kreiser and Davis (2010) mentioned that proactiveness is an orientation for seeking out and recognizing any

opportunities to capture new product markets before the competition begins within a business environment. Certo et al. (2009) and Dess and Lumpkin (2005) stated that a proactive firm will be the first to enter a new market and introduce new products in view of the strategic planning for future opportunities initiated by them earlier. The first movers have the advantages as the industry pioneers who can capture higher returns, as they have no competitors around them and their image can be retained and held in the market by establishing brand recognition (Dess & Lumpkin, 2005).

However, there are arguments against the first movers. Lumpkin and Dess (1996) stated that a firm can be new, fast, and forward thinking without being the first in a business competition all the time. Dess and Lumpkin (2005) also argued the possibility of first mover success depends on the maturity of the firms in handling the market. According to Lumpkin, Wales and Ensley (2006), young ventures may be severely limited in the anticipation of market demand through lacking resources, which influences the seeking and implementation of new opportunities. It is complicated to think that the young firms try to be first movers without having enough resources and being ready to do it (Dess & Lumpkin, 2005). That is why, in applying proactiveness, the most important aspect is the firm's capabilities and willingness to seek new opportunities throughout the business life cycle, even though they are not always the first to do something (Lumpkin & Dess, 1996).

Thus, following previous studies, this study conceptualized proactiveness as the extent to which SMEs owners/managers are concerned with the new product introductions and technological capabilities compared to their competitors, and

continually looking for opportunities in the market, besides being the first in entering the market, and in innovations. But, in addition to being the first, a proactive strategy is also needed to carefully monitor and research that would be able to create any competitive advantage (Dess & Lumpkin, 2005). Firms that perform well in monitoring and research usually have substantial growth and success and have a high survival rate, as well as remaining proactive for years.

2.6.1.2.3 Risk Taking

According to Lumpkin and Dess (1996, p. 144), risk taking "has various meanings, depending on the context in which it applied". Business risk taking, financial risk taking and personal risk taking are examples of risks that an organization faces (Dess & Lumpkin, 2005). Many studies have considered the risk-taking dimension in their study (e.g. Coulthard, 2007; Covin & Slevin, 1988; Covin & Slevin, 1991; Kreiser & Davis, 2010; Lumpkin & Dess, 1996; Rauch et al., 2009; Wiklund & Shepherd, 2005).

Fundamentally, risk taking refers to a firm's propensity to take on risky projects and to grab new business enterprises even though the influence, impact and successfulness are unknown (Certo et al., 2009; Dess & Lumpkin, 2005; Lumpkin & Dess, 1996). Lumpkin and Dess (2001) defined risk taking as the proclivity of firms to take bold actions in unknown new markets, which involves huge resources for ventures with uncertain results and a lot of loans. It is the willingness of an

entrepreneur to utilize as well as to allocate more resources to a project without knowing the outcome for the company (Wiklund & Shepherd, 2005).

Within the context of this study, and following Covin and Slevin (1988; 1989), Dess and Lumpkin (2005), Lumpkin and Dess (1996), and Miller and Friesen (1982), risk taking was conceptualized as the extent to which SME owners/managers tend to engage in risky projects and seize the opportunity of new business without knowing the outcome for the organization. According to Dess and Lumpkin (2005), an entrepreneurial firm needs to face such risks, for example, high levels of debts, optimum resource allocation, investing new technologies, and introducing new markets, in order to obtain high profitability outcomes. Lumpkin and Dess (1996) agreed that a business cannot avoid risks to succeed. Usually, new and young firms are more likely to take risks than established firms, as the latter are better in facing those risks in a business milieu by experience (Lumpkin et al., 2006).

Although risk-taking practices enable firms to improve their product and volume flexibility (S. C. Chang et al., 2007; Lumpkin & Dess, 1996), by its nature, risk taking provides possible damages and drawbacks for firms (Dess & Lumpkin, 2005). Even so, as suggested by Dess and Lumpkin (2005), the possibly bad influences can be minimized as thorough decisions and planning are emphasized. Entrepreneurs should be more effective as uncertainty reducers, instead of being reckless risk-takers (Certo et al., 2009). Dess and Lumpkin (2005) also stressed that 'best' companies "will investigate the consequences of various available opportunities in order to reduce the riskiness of business decision-making" (p. 152). As a result, they will see

the probabilities of uncertainty that could affect them afterwards (Certo et al., 2009). Typically, entrepreneurs are not risk takers, but they understand and investigate the risks more, before seizing any available opportunities (Dess & Lumpkin, 2005). The practice can be decisive for the success and survival of a firm (Coulthard, 2007; Matsuno, Mentzer, & Özsomer, 2002).

2.6.1.3 EO and Organizational Performance

Scholars argue the importance of EO in increasing firm performance (Covin & Slevin, 1988; Wiklund, 1999; Wiklund & Shepherd, 2005). Davis, Bell, Payne, and Kreiser (2010) contended that managers with a stronger EO will help toward achieving better organizational performance (Covin & Slevin, 1991; Kreiser & Davis, 2010; Lumpkin & Dess, 1996). Madsen (2007) found that a firm that developed a higher value of EO over time appeared to have better performance than its competitors with the same EO, or a lower value of EO. Other researchers also found the positive effect of EO on the performance of small- and medium-sized enterprises (SME) (Moreno & Casillas, 2008; Wiklund & Shepherd, 2005).

The multi-dimensional construct of EO permits researchers to investigate EO influence on firm performance. While some studies showed that EO had a positive correlation with organizational performance, others failed to find such result (Kreiser & Davis, 2010; Wiklund & Shepherd, 2005). As stated by Davis (2007), the differences in the result may be due to how EO was treated, i.e. as a uni-dimensional

or a multi-dimensional construct. The following discusses the multi-dimensionality of EO influence on performance.

The first dimension of EO is innovativeness. It refers to the willingness for putting forth efforts aimed at developing new products, services and processes that are profitable and better than the competitors (Certo et al., 2009; Lumpkin & Dess, 1996). It has been argued that innovativeness is important in developing firm success and survival (Coulthard, 2007). Several empirical studies found that innovativeness enhanced firm performance. For example, Zahra and Covin (1995) found that EO enhanced wealth, better marketplaces, seeking and handling opportunities. In other words, innovativeness puts the organization ahead of its competitors. Swierczek and Ha (2003) found the positive impact of EO on SME performance. Being innovative helps SMEs to identify market trends, make quick decisions on products or new developments, and be faster in pursuing new opportunities, which lead to increased organizational performance (Swierczek & Ha, 2003; Wiklund, 1999). In the same vein, Coulthard (2007) found that innovativeness was one of the fundamental dimensions that led to performance improvement in the automotive components industry and wine industry, as the strong buying power of customers accelerated the innovation effort. In a different study on 434 SMEs, Moreno and Casillas (2008) revealed positive correlations between EO and performance.

Proactiveness is a second dimension of EO and it refers to the firms' ability in discovering and pursuing new opportunities (Lumpkin & Dess, 1996), introducing new products (Covin & Slevin, 1991), and exploiting the future prospects in order to

be better than the competitors (Miller, 1983). Despite being argued to enhance firm performance, previous studies did not report consistent results (Coulthard, 2007; Rauch, Wiklund, Frese, & Lumpkin, 2004). Coulthard (2007) investigated four different industries in Australia: wine, automotive components, franchising, and music recording industry. He found that proactiveness was the key dimension in the automotive components industry, but ranked third in the wine and franchise industry, leading him to suggest that the proactiveness dimension might work differently in different industries. For example, the automotive component industry has to develop better quality products than their competitors and in the franchising industry, proactiveness is critical at the start-up level. Despite the different roles proactiveness plays, Coulthard (2007) contended that proactiveness is an important key dimension in improving firm performance. Rauch et al. (2004) also found that proactiveness was an important influence in determining a firm's success and survival.

The last dimension of EO proposed by Miller (1983) is the risk-taking dimension. It refers to the proclivity of a firm to adopt risky actions in discovering new markets without ensuring the after effects (Lumpkin & Dess, 1996). Relating risk taking with performance, Coulthard (2007) and Lumpkin et al. (2006) revealed that the risk-taking influences were varied and mixed in certain conditions. Swierczek and Ha (2003) found that Thai SMEs were less risk taking but more innovative and proactive than Vietnamese SMEs because the latter had had experienced war and economic mismanagement. Lumpkin et al. (2006) showed that new ventures tended to take risks more if they wanted to succeed.

In his study, Coulthard (2007) found that in the wine industry, the risk taking was rated the lowest in improving performance compared to the other EO dimensions. He stated that the reason behind the result was unclear, and it might be due to the definition of what 'risk' means by the distinguished wine companies. However, the results show that in the automotive components industry, the manageable or calculated risk-taking dimension was deemed to be important in improving the industry performance. The respondents did agree that they fully considered and identified the possible consequences of risks that could affect their business performance. In the franchise industry, the respondents rated risk-taking as the second most noticeable dimension. In fact, Coulthard (2007) stated that risk-taking influences performance, whether it has positive or negative consequences. However, in the majority of cases, Coulthard (2007) and Matsuno et al. (2002) agreed that considerations and strategies are developed to minimize the risks and the effects of the risks that could be opportunities to increase and improve the survival of their firms.

2.6.2 Human Resource Management (HRM) Practices

2.6.2.1 Definition and Conceptualization of HRM practices

Human resources play an important role in the organization's operation and success (Abdullah, Ahsan, & Alam, 2009). According to Hassan (2010), and Osman, Ho, and Galang (2011b), the revolution of a new era of business implementation, including SMEs, practices such as e-business, globalization, and technological advancement need human resources (employees) to have the capability to face many challenges.

Specifically, organizations attempt to add value to their human resources (Omar, Arokiasamy, & Ismail, 2009), as well as managed the resources through a personnel department as a way of increasing their organizational performance (Abdullah et al., 2009; S. Ahmad & Schroeder, 2003; Osman, Ho, & Galang, 2011a).

Human resource management (HRM) is the term for the process of managing human resources in an organization, and it refers to aligning those practices with business or corporate strategies (A. E. A. Othman, 2009; Panayotopoulou, Bourantas, & Papalexandris, 2003). It can also be referred to as the policies, practices, and systems that influence the behavior, attitudes, and performance of employees in an organization (Rowley, Benson, & Warner, 2004). In other words, HRM helps the organization manage its employees parallel with the strategies of the organization in achieving higher performance and success (A. E. A. Othman, 2009).

Human resource management has evolved with substantial change and redefinition over the past century in its theories, research, and practices. In the last two decades, it has gone through a major process of transformation in terms of form and function. The increasing pressure from internal and external environmental factors has significantly pushed HRM to evolve from its primary function of administrative tasks to a role as a source of sustained competitive advantages in supporting organizations that operate in a global economy (Ferris, Hochwarter, Buckley, Harrell-Cook, & Frink, 1999). HRM considers the role of managers in managing their employees as an elemental part of managing a business (R. Othman, Abdul-Ghani, & Arshad, 2001). It stresses the need for developing strategic management approaches to

organize and manage the organization's workforce for every 'human' role in an organization. Othman et al. (2001) suggested that to manage the HRM strategies effectively, managers should have the competencies and understand the strategies clearly to utilize the approach in their organizations.

According to Guest (1997, p. 263), "the impact of human resource management on performance has become a major research issue in the field". Moreover, Hornsby and Kuratko (1990; 2003) found that employees who were motivated and highly skilled can be a determinant of the capability of small firms in maintaining competitiveness in the current business environment. Rauch, Frese, and Utsch (2005), and Pfeffer (1998) also claimed that human resources have a major role in producing transformations in a small-scale enterprise development.

There are several approaches to studying HRM practices in relation to organizational performance. They are universalistic, contingency, and configurational perspectives (Delery & Doty, 1996; Youndt, Snell, Dean, & Lepak, 1996). The universal, or "best practices" perspective is the simplest form of theoretical model in HRM literature and their researchers are micro-analytical in nature. This perspective involves a direct relationship between HRM practices and performance (Youndt et al., 1996), whereby some HRM practices are hypothesized as constantly superior to others, and these best practices should be adopted by all organizations (Delery & Doty, 1996).

The contingency perspective, on the other hand, posits that the impact of HRM practices on firm performance is conditioned by an organization's strategic posture.

Researchers in the contingency approach dispute that HRM practices that are applied by any organization must be coherent with other aspects of the organization, so as to be effective. They have tried to explain the interaction between various HRM practices and specific organizational strategies as they relate to organizational performance (Youndt et al., 1996).

In contrast to the "best practice" and contingency approach, the configurational perspective is interested in how the pattern of multiple HRM practices relates to organizational performance. Wright and McMahan (1992) argued that there is a pattern of intended human resource deployments and activities that can help facilitate an organization to achieve its goals. In order to be effective, an organization must build up its HRM system so that it reaches both a horizontal and vertical fit. Horizontal fit refers to the internal consistency of the organization's HRM practices, and vertical fit refers to the congruence of the HRM system with other organizational characteristics such as firm strategies.

Consequently, in order to explain the process of examining HRM practices that are related to organizational performance, the researcher can comply with either of the previously discussed practices, or a combination of those three different approaches, which are universalistic, contingency, and configurational. This study adopted the universalistic perspective for several reasons. Firstly, the universalistic perspective is suggested as the primary approach since most HR studies are centered on a holistic or universal view of HRM practices and organizational performance, highlighting a set of practices used by all firm employees and the uniformity of these practices

across firms. Secondly, this perspective enables researchers to study the contribution of each HRM practice on organizational performance relative to each other. Thirdly, the universalistic or "best practices" approach has been more frequently used than other perspectives (Huselid, 1995; Pferfer, 1994).

Numerous studies have attempted to explain universalistic predictions. For example, Carlson, Upton, and Seaman (2006) found a positively significant impact of the use of five best HRM practices, namely, training and development, recruitment package, maintaining morale, use of performance appraisals, and competitive compensation on family-owned SME performance. They further studied the relationship between compensation designs and performance and found those firms that applied more cash incentive had more significant relationships with sales growth performance at every level in the organization. In addition, Jayawarna, Macpherson, and Wilson (2007) found that training activities were consistently correlated with organizational performance.

Furthermore, previous studies reported that different studies have used different HRM practices in explaining the effect of certain HRM practices on organizational performance, yet there is no consistency as to what HRM practices should be covered in a "best practices" system. Pferfer (1994), for instance, claimed the increased use of 16 management practices in enhancing productivity and profitability. Delery and Doty (1996), on the other hand, identified seven key strategic human resource practices. In contrast to individual practices, Huselid (1995) examined 13 high performance work practices, or simply labeled "best practices",

and concluded that the organization that used sophisticated HR practices was significantly associated with turnover, organizational productivity and financial performance. In another study, Ichniowski, Shaw, and Prennushi (1997) utilized 13 innovative practices falling under seven categories corresponding to high-involvement practices to increase productivity and quality.

Despite the fact that there is a comprehensive list of HRM practice that can affect organizational performance, some difficulties in the interpretation of the HRM-performance relationship may occur. This is because not all HRM practices are able to affect organizational performance, either directly or indirectly (S. Ahmad & Schroeder, 2003; Cardon & Stevens, 2004). Indeed, recent researchers have started to select some specific HRM practices in examining the effects of HRM practices on organizational performance, particularly in the context of SMEs. In SMEs, HRM practices may be given less attention due to the limited size and resource availability (Klaas, McClendon, & Gainey, 2000), and the SMEs are alleged to adopt HRM practices informally and incomprehensively (De Kok & Uhlaner, 2001). Therefore, the selection of HRM practices needs to be scrutinized and adapted to the context of the SMEs.

Drawing from the universalistic or “best practices" perspective, there are several combinations of HRM best practices that have been studied in the context of SMEs. But, there is no agreement about which combination of practices is good or better than other combination. For example, Subramaniam et al. (2011) adapted four practices; Nasution et al. (2011) used two practices; Osman et al. (2011a) applied

nine practices; Daud and Mohamad (2010) explored six practices; Kwang et al. (2008) adapted four practices; Vlachos (2008) adapted six practices; Carlson et al. (2006) applied five practices and Cardon and Stevens (2004) analyzed six practices in their studies (see Table 2.2 for a summary of best HR practices used by different studies in SMEs).

Table 2.2
Summary of Best Practices in Human Resource used by different studies in SMEs

Author	HRM Practices
Osman et al. (2011a)	1. HR planning 2. Staffing 3. Job work design 4. Training & development 5. Performance appraisal 6. Compensation 7. Employee relations and communication 8. Health and safety 9. Job satisfaction
Subramaniam et al. (2011)	1. Compensation policy 2. Information sharing 3. Training and development 4. Job security
Nasution et al. (2011)	1. Job related 2. Reward related
Daud and Mohamad (2010)	1. Recruitment & selection 2. Training & development 3. Performance appraisal 4. Preparation of payroll 5. Communication with employees 6. Administrative management of HR
Kwang et al. (2008)	1. Selection and recruitment 2. Incentive and compensation 3. Training and development 4. Team-based problem-solving

Table 2.2 (Continued)

Author	HRM Practices
Vlachos (2008)	1. Compensation policy 2. Decentralization and self-managed teams 3. Information sharing 4. Selective hiring 5. Training and development 6. Job security
Carlson et al. (2006)	1. Training and development 2. Recruitment package 3. Maintaining morale 4. Performance appraisals 5. Compensation
Cardon and Stevens (2004)	1. Staffing 2. Compensation 3. Training & development 4. Performance management 5. Organizational change 6. Labor relations

However, in this study, the selection of HRM practices was made based on the commitment-based HRM configuration adapted from Lepak and Snell (2002). The selection of the HR practices was consistent with the adoption of innovative approaches to HRM practices, which are deemed to be similar to organizational concept of high-involvement or high-performance work system (Guthrie, Spell, & Nyamori, 2002; Takeuchi, Lepak, Wang, & Takeuchi, 2007; Vlachos, 2009; Way, 2002) or innovative HRM (Agarwala, 2003; Zheng, O'Neill, & Morrison, 2009). The commitment-based HRM practices contain several 'best practices' in the current literature of SHRM. Moreover, additional support for this explanation comes from Arthur (1994), in which he reported that organizations with commitment-oriented HR system have better manufacturing performance than organization control HR

system. Therefore, the selected HRM practices can be conducive for innovation within the organization and for enhancing performance study.

Following Takeuchi, et al. (2007), this study adapted five HRM practices from Lepak and Snell's (2002) commitment-based HRM system. The five practices adapted consisted of compensation, job design, performance appraisal, selection and training and development. This study also added the practices of communication and information sharing adapted from Agarwala (2003). The choice of six HRM practices was made based on Boselie, Dietz, and Boon (2005), who compiled a list of research articles related to HRM and performance. Of their review on 104 articles, 83 articles were on training and development, 71 on contingent pay and reward scheme, 51 articles performance management (including appraisal), 50 recruitment and selection, 32 communication and information sharing, and 25 job design and job rotation. Having the most support across literatures, the researcher's choice of these six practices was justified.

Lepak and Snell (2002), Snell and Dean (1992) and Youndt et al. (1996) similarly agreed that the five key HRM practices are staffing, training and development, performance appraisal, compensation and job design. According to Pfeffer (1998), communicating and sharing of information is one of the seven practices of successful organizations and it is a key component in a high-performance work system (Zacharatos, 2001). This is also consistent with the approach validated by Bowen and Ostroff (2004), who claimed that with regard to the assessment of employees on the important dimensions of HRM, researchers get a better understanding of the extent to

which HRM practices probably affect the effectiveness of the organization. Therefore, it was expected that these six HRM practices could be closely associated with organizational innovation and organizational performance in the Malaysian SMEs.

In the Malaysian context, SMEs implement the common HRM practices such as staffing, training and development, performance appraisal, compensation, job design and communication and information sharing, as shown by previous studies (e.g., Boselie et al., 2005; Lepak & Snell, 2002; Pferfer, 1994; Snell & Dean, 1992; Youndt et al., 1996). This was proven by the emergence of recent studies on HRM practices in Malaysian SMEs. Daud and Mohamad (2010) investigated the extent to which HR practices are implemented by the Malaysian SMEs. They discovered a substantial difference between 108 SMEs surveyed with respect to the adoption of HR practices, where a majority of these organizations used an informal approach to managing their HR practices.

Meanwhile, Osman et al. (2011a) disclosed that slightly more than half of 43 SMEs surveyed (51%) in the service sector had an HR department. They also revealed that SMEs with in-house HR department implemented HRM practices (such as training and development, performance appraisal, employee relations and communication) more often than those without an in-house HR department. Besides that, employees showes higher job satisfaction in the organizations that had their own HR department. In another recent study, Subramaniam et al. (2011) found positive relationships between compensation, information sharing, and training and

development and organizational performance among 84 SMEs (22 of them were small-sized) in the central region of Peninsular Malaysia. Kwang et al. (2008) examined the mediating role of HRM practices in the relationship between EO and organizational learning (OL) capability in Sarawak. They found that HRM practices directly and indirectly affected OL capability of SMEs.

Therefore, within the context of this study and following Takeuchi et al. (2007) and Agarwala (2003), HRM was conceptualized as a combination of several practices that are systematically designed to be geared towards improving SME effectiveness and yielding better performance outcomes. The practices considered were compensation, job design, performance appraisal, selection, training and development, and communication and information sharing. The following discusses each practice in detail.

2.6.2.2 Communication and Information Sharing

Communicating and sharing of information is a key component in a high-performance work system (Zacharatos, 2001). It is one of the seven practices of successful organizations (Pfeffer, 1998). In an effort to work effectively, employees need access to information. Pfeffer (1998) proposed that information is one of the most valuable resources for any organization. By providing employees with information, they will better understand the operation and goals of the organization. Information sharing can be defined as the willingness of the organization to

communicate the organizational strategy as well as provide feedback on the performance to employees (S. Ahmad & Schroeder, 2003).

There are two ways to explain the effect of communicating and sharing information across the organization. First, sharing of information can reflect the trust of an organization towards employees. Second, sharing of information allows the employees to acquire critical information that can assist in improving performance (Zacharatos, 2001). Even employees who are motivated or well-trained will not be able to contribute to organizational performance improvements if they are not informed about the objectives and strategies to achieve the organizational goals (Pfeffer, 1998; Vlachos, 2008; Zacharatos, 2001).

Similarly, Ahmad and Schroeder (2003) discovered that communicating and sharing of information could actually empower the workers and foster the characteristics of organizational transparency, which is very essential for the employees to work longer in the organization, thereby indirectly reducing the problem of turnover in the organization. In addition, organizations that communicate information about the performance routinely to employees throughout the year allow them to improve and develop their work. Without information sharing, the employees are not aware of the progress of their work, even though they feel that their work has reached the level expected of the organization (Chow, Harrison, McKinnon, & Wu, 1999).

However, despite the benefits, information sharing is not substantially adopted by the organization. Many organizations are reluctant to share their important information

with their employees because by doing so the employees are likely to be more influential and harder to control (Pfeffer, 1998). This is supported by Ronde (2001) that information sharing can cause the leakage of secret information to the competitors. Since communicating and sharing of information provides benefits to the organization, it is appropriate for SMEs to adopt such practice. This is because SMEs have a flat organizational structure, which this will allow information to be transmitted quickly in the organization. Apart from that, SMEs often adopt flexibility in their management, making information sharing suitable to apply.

Therefore, within the context of this study and following Agarwala (2003), this study conceptualized communication and information sharing as the extent to which the owners/managers of SMEs perceive that the organization concerns about their employees such as shares information with the employees, encourages open and transparent communication among them, organizes family gathering, provides supportive work environment, appreciates employees' contribution, as well as ensures fairness in management practices.

2.6.2.3 Compensation

A compensation system that is based on performance is used to assess and reward employees' performance (Carlson et al., 2006; Delery & Doty, 1996). It can be described as a pay incentive or rewards to stimulate individuals to join, retain, and perform well over time for the firm (Cardon & Stevens, 2004). Reward can be in the form of cash incentives, non-cash incentives, benefits and perks (Carlson et al.,

2006). The objective of a reward is to motivate employees to perform their job effectively in order to facilitate the accomplishment of organizational goals. Thus, it is crucial to decide how employees are being paid. As with other HRM practices, small firms tend to practice informal systems of compensation or reward such as recognition and reinforcement, pay increment, job security etc. (McEvoy, 1984).

However, to attract good applicants and sustain quality and talented employees, SMEs should design an effective formal system of reward, since it is a potential source for achieving a competitive advantage, which contributes to organizational performance (Carlson et al., 2006; Delery & Doty, 1996; Tzafrir, 2006). Carlson et al. (2006) showed that cash incentive was found as the reward mostly used in SMEs instead of rewards in the form of non-cash reward, perks, and benefits.

Hence, following Takeuchi et al. (2007), this study conceptualized compensation system as the extent to which the owners/managers of SMEs perceive that the organization offers compensation packages including extensive benefits, high wages, performance-linked reward system, and ties its incentive system to skill-based pay.

2.6.2.4 Job Design

Much job design research has focused on using job design methods and techniques to enhance good work attitudes and behavior by stimulating employees' psychological state of motivation (e.g., Morgeson & Humphrey, 2006; S. K. Parker & Wall, 1998). One of the job design approaches is Job Characteristics Model (JCM) (Hackman &

Oldham, 1976), which focuses on five core job characteristics (skill variety, task identity, task significance, autonomy, and job feedback). According to JCM, if these five job characteristics exist, individuals will experience job meaningfulness, responsibility, and knowledge, which, in turn, have a positive impact on their work motivation, satisfaction, and performance.

While the impact of job design on micro-level outcomes has been ascertained (Becker & Huselid, 2010; Oldham & Hackman, 2010; S. K. Parker, Wall, & Cordery, 2001), Baron (2010) encouraged job design theorists to focus on firm-level outcomes as well. This is to reflect the changing nature of work from manufacturing to service and "knowledge work" and the changes that occur in the external environment such as greater global competition, new forms of work-oriented information and communication technologies, increasing employment services sector, growth in unexpected work, individualized career paths and changes in the competitive employment. Because job design is part of high-performance human resource practices, it can be used in such a way to attain favorable business outcomes such as profitability, shareholder value etc. (Zhang, Wan, & Jia, 2008). Therefore, in line with Takeuchi et al. (2007), this study conceptualized the practice of job design as the extent to which the owners/managers of SMEs perceive that the organization is involved in job rotation, empowers employees to make decisions and designs job according to the employees' capabilities.

2.6.2.5 Performance Appraisal

Performance appraisal or management is a process to assess the extent to which employees perform the job well (Noe, Hollenbeck, Gerhart, & Wright, 2010). According to Delery and Doty (1996), performance appraisal has been acknowledged as strategic HR practices, which are results or behavior oriented. Behavior-oriented appraisal centers on the employees' behaviors needed to perform the job effectively, while result-oriented appraisal emphasizes the upshot of those behaviors.

According to Liu, Ruan, and Xu (2005), performance management or human resource appraisement is the way to estimate the values of human resources in organizations. It supports the appraisal of human resource's ability, performance, knowledge, interest and value for the job adjustment, future placement and needs of the resources. Leede and Looise (2005) pointed out that the appraisal encourages employees to increase their work performance, and maximize their values in the workplace (Liu et al., 2005). Soltani (2003) pointed out that most organizations conduct the appraisal by linking the performance of the employees to training and development.

Prior findings highlighted that performance appraisals affect the performance of a firm (Delery & Doty, 1996; King-Kauanui, Ngoc, & Ashley-Cotleur, 2006). However, this practice is likely to be informal in small firms and tend to focus on monitoring and controlling rather than employees' development (Cassell, Nadin, Gray, & Clegg, 2002). As an alternative, SMEs should develop a systematic

performance appraisal in order to develop their employees' capabilities by allocating more time in providing a developmental response, communicating problems and discovering new aspects to develop.

Thus, following Takeuchi et al. (2007), this study conceptualized performance appraisal as the extent to which the owners/managers of SMEs perceive that the organization conducts performance appraisals objectively in which the result can be quantifiable. Performance appraisal also involves management by objective with mutual goal setting, emphasizes feedback of employee development and team performance.

2.6.2.6 Selection

Staffing refers to the activities, including recruitment and selection, to identify and attract potential employees (Noe et al., 2010). With a thorough process of recruitment and selection of employees, employers can get the best and brightest workers to contribute to the organization. Selection is a critical practice and must be implemented cautiously to acquire employees who are really qualified so as to improve organizational growth. Jassim (2007) added that the recruiting and selection is an opportunity for organizations to choose highly capable employees for the accomplishment of organizational performance (S. Ahmad & Schroeder, 2002, 2003). An effective selection promises loyalty to the organization as there is congruence between employees' attitudes, values and behaviors and the organizations' strategies and visions.

Ahmad and Schroeder (2002) mentioned that the recruitment process normally stresses on the employee's technical skills and soft skills, whereby the soft skills behaviors are crucial in determining the organization's effectiveness. The employees should be eager to work in teams, quality management, problem-solving and ideas giving to improve processes. Recruiting new employees is one of the main challenges in SMEs, and it is a key component to the organization's success and survival (Carroll, Marchington, Earnshaw, & Taylor, 1999; Williamson, 2000). Similarly, Hornsby and Kuratko (2003) suggested that further research on selection in small firms is need as selection and recruitment remain a critical issue in HRM for small firms as well. Generally, SMEs have a tendency to utilize informal methods of recruitment (e.g., walk-ins and newspaper ads) and selection (e.g. face to face interview, application blanks and reference checks). Nevertheless, as small firms grow, it is necessary to develop more formal methods in employee recruitment in order to maintain growth (Williamson, 2000).

Within the context of this study and following Takeuchi et al. (2007), this study conceptualized selection as the extent to which the owners/managers of SMEs perceive that the organization uses a comprehensive selection process to find the best candidates to collaborate and work in teams, screen job candidates, and emphasize promotion from within.

2.6.2.7 Training and Development

Training and development is defined as activities that have been planned to assist learning related to job knowledge, skills and employee behavior (Noe et al., 2010). Well-trained employees can share their knowledge and use their creativity to produce or serve a product to customers, and understand the systematic development of products or services in the organization. Training involves the fostering of learning and education activities to improve employees' competencies and skills in the organization (Omar et al., 2009). Training focuses on teaching the members of the organization on how to perform their jobs more effectively, while development is about developing the knowledge and skills of workers in an effort to improve their careers (Hemdi, 2005).

According to Stavrou-Costea (2005), training and development of employees is essential for the success of an organization. Past researchers have found evidence of the impact of training on productivity improvement, capability development, and beneficial sharing in the organization (T.-C. Huang, 2001).

In Malaysia, several industrial training institutes have also been established to provide training to enhance skills at the basic, intermediate, and advanced levels (Osman et al., 2011b). However, Rowley et al. (2004) mentioned that the training and development in SMEs is a challenge compared to large companies. The nature of work practices in SMEs makes it difficult to measure the skill acquisitions and

associated items related to training and development effectiveness (Johnson & Devins, 2008), due to the complex issue of the SME size (Wilkinson, 1999).

However, the Malaysian government is providing support to expand the pool of skilled employees for Malaysian SMEs. The Ministry of Human Resources (MOHR), through its agency, Human Resource Development Limited (Pembangunan Sumber Manusia Berhad – [PSMB]) has set up a special scheme called the Human Resource Development Fund (HRDF), which gives funding to SMEs to let their employees undergo training and development. To further encourage the use of HRDF among SMEs, PSMB organizes a variety of events including a series of CEO-HRD Talks and seminars to develop an understanding on the importance of training and development. As a result, according to NSDC (2011), there was an increase in the number of employers who registered with PSMB in 2010. Of 12,546 employers who registered, 6,695 (53.4%) were from the manufacturing sectors and 5,851 (46.6%) from the service sector. Of the total, 9,170 or 73.1% were SMEs. In 2010, a total of 626,270 training placements were approved, amounting to RM317.9 million and RM269.6 million were approved for training grants. Findings by the World Bank under the SME Masterplan (2012-2020) showed that the HRDF training programme had a positive impact on SMEs, not only on value-added investment, but also on labor productivity and wages (NSDC, 2012b). This shows that SMEs train and develop their employees in order to equip them with skills, knowledge, capabilities, technical know-how and best practices so that they effectively perform well on the job.

Therefore, in line with Takeuchi et al. (2007), this study conceptualized training and development as the extent to which the owners/managers of SMEs perceive that the organization trains and develops their employees' firm-specific skill and knowledge for the betterment of organizational performance.

2.6.2.8 HRM Practices and Organizational Performance

The current business environment since the 1990s has relied on people's recognition, productivity, and creativity since the leading organizations that applied HRM practices were often followed by higher productivity and better performance (Hassan, 2010). Hence, over the past decade, previous studies have reported the importance of HRM practices in improving organizational performance (Abdullah et al., 2009; Bae & Lawler, 2000; P.-L. Chang & Chen, 2002; Mohamad, Lo, & La, 2009; Panayotopoulou et al., 2003). Carlson et al., (2006) empirically examined the consequences of HRM practices among a sample of 168 family-owned SMEs. They found that the HR activities--training and development, recruitment package, maintaining morale, performance appraisal, and compensation--positively impacted organizational performance. By using data from Taiwan's high-tech firms, Chang and Chen (2002) found that training and development, teamwork, benefits, HR planning and performance appraisal had a significant effect on employees' productivity and which in turn, improve firm performance. Bae and Lawler (2000) also found a positive and significant result between HRM practices and performance. According to Hassan (2010), SMEs with more effective HRM practices will have

better organizational performance because through better HRM, they can achive the goals of quality standard from ISO certification.

Although the adoption of HRM practices in Malaysia is growing (Abdullah et al., 2009), studies on the effectiveness of the practices are still limited and, if any, considered only a few aspects of HRM (Hassan, 2010). In their study to evaluate the effect of HRM practices on 152 Malaysian private companies, Abdullah et al. (2009) considered training and development, teamwork, compensation or incentives, HR planning, performance appraisal and employee security. They found that these practices had a positive and significant impact on the performance of a business. In examining 85 firms in Sarawak, Mohamad et al., (2009) found that four HRM practices, namely, employee training, incentives, information technology and performance appraisal, were positively correlated with organizational performance. Osman et al., (2011b) also found that the implementation of HRM practices had a major influence on the performance of 217 organizations. Studies on the effect of HRM practices on performance in smaller-scale businesses are also increasing (e.g. Carlson et al., 2006; Cunningham & Rowley, 2007; King-Kauanui et al., 2006; Rauch & Frese, 2000; Sels et al., 2006; Zheng, Morrison, & O'Neill, 2006).

It is argued that HRM has a proactive role instead of a reactive role in an organization (Schuler & MacMillan, 1984), and it is deemed to be a strategic partner in strategic formulation and implementation (Ultrich, 1987). Huselid (1995) added that the application of good HRM practices in the organization can develop the knowledge, skills and abilities of present and prospective employees, strengthen their

motivation, decrease avoidance, and retain excellent employees while pushing non-performers to quit, and which in turn, improve employee and organizational performance.

In a similar vein, Delaney and Huselid (1996) and Huselid (1995) noted that the impact of HRM practices on organizational performance depends on how HRM practices affect employee's skills and abilities, motivation, and organizational structure. The impact of HRM practices on the employee's skills and abilities is portrayed in recruitment, selection, and training. Organizations can hire employees through sophisticated selection procedures that have been created to choose the best potential employees. After selection, employees can be provided comprehensive training and development programs in order to advance their knowledge, skills, and ability in performing their jobs. The effectiveness of skilled employees will be restricted if they are not motivated to do the job. Therefore, to motivate employees, employers can encourage their employees to work efficiently through the performance appraisal based on individual and group performance, relating these appraisals to reward systems, the use of internal promotion systems based on employee merit, and other types of incentives that support the interest of employees with those of shareholders.

Finally, the contribution of skilled and motivated employees is influenced by the way in which a workplace is structured. If jobs are structured, it will limit the way employees perform their job. All in all, HRM practices can affect organizational performance by enhancing productivity and product quality (Ichniowski et al., 1997),

diminishing absenteeism, minimizing levels of management, and decreasing the rate of complaints (Murphy & Southey, 2003). This is supported by Becker and Huselid's (1998) research on HPWS, which showed that the practices of high-quality human resources had a positive impact on the company's financial performance. Similar finding was reported by Akhtar, Ding, and Ge (2008) in their sample of 465 Chinese enterprises.

Previous empirical studies revealed the positive relationship between **communication and information sharing** and organizational performance. For instance, Morishima (1991), in his study of Japanese consultation committees, disclosed that sharing of information had a positive correlation with the performance of an organization in terms of productivity and profitability, while a negative relation with labor costs. Vlachos (2008) also showed that information sharing improved market share and sales, but no significant relationship between information sharing and product quality or product cost was found. Information sharing can affect organizational performance through synergistic working relationships that exist between employees (Nonaka, 1994 cited in Vlachos, 2008). Whenever employees exchange information and work together, they establish a conducive organizational climate that encourages then to give full commitment to the organization, leading to reduced turnover rate and hence better organizational performance (S. Ahmad & Schroeder, 2003; C. Subramaniam et al., 2011). Subramaniam et al. (2011) conducted a study in Malaysian SMEs and demonstrated that information sharing was related to organizational performance. They discovered that SMEs facilitate their employees to share information, leading to trust development among workers and

employers, which enables SMEs to accumulate all the significant input in order to make decisions that are critical to organizational success.

In SMEs, the practice of **compensation policy or reward system** is believed to be a major influence on organizational performance. In their study, Carlson et al. (2006) found that compensation was one of the most critical practices of business performance. It can be a powerful message to the employees about what they are expected to do in the organization (Jassim, 2007). Behaviors that are consistent with organizational expectation facilitate organizational performance. Lo, Mohamad and La (2009) found that incentives had a significant relationship with organizational performance, as expected. Similarly, Carlson et al., (2006) found a positive significant impact of competitive compensation on family-owned SME performance. They discovered that firms that applied more cash incentive compensation had significantly higher sales growth performance at every level in the organization. Vlachos (2008) conducted a study on the effect of HRM practices on five different measures of firm performance, classified as firm-specific, market-related and overall firm performance. He discovered that the compensation policy had a significant effect on all performance variables.

Job design that provides discretion for their holders, variation and high levels of responsibility is related to job redesign and job enrichment, which are argued to influence the quality of working life of employees, employee well-being and consequently organizational performance (Batt, 2002; Stephen Wood, Veldhoven, Croon, & Menezes, 2012; Stephen Wood & Wall, 2007). As such, job design should

be considered when examining the effects of high performance work system on employee experience of work, employee well-being and job satisfaction (Harley, Allen, & Sargent, 2007; Macky & Boxall, 2007; Mohr & Zoghi, 2008; Takeuchi, Chen, & Lepak, 2009; Takeuchi et al., 2007) and which in turn, improve organizational performance (e.g., Harter, Schmidt, & Hayes, 2002; Mathieu & Zajac, 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Vandenberg, Richardson, and Eastman (1999) found a positive influence of flexibility of work design on returns on equity (ROE) in which the more an organization invests in programs to increase work-life balance, the greater the ROE for that organization. Gu and Gera (2004) also added that among HRM practices, flexible job design was more significant relationship with firm performance compared to performance-based pay or improving industrial relations. The effect was relatively large in improving the productivity and innovation.

Mohamad, Lo and La (2009) found that **performance appraisal** enhanced organizational performance. Jassim (2007) asserted that performance evaluations are important as managers or supervisors need to evaluate whether or not their employees have achieved their work targets toward accomplishing organizational goals (Leede & Looise, 2005). The adoption of performance appraisal enables organizations and employees to review past performance and set up planning and strategies to enhance organizational performance in the future (Jassim, 2007; Leede & Looise, 2005).

Selection or staffing is also a major influence in organizational performance. In their study, Carlson et al. (2006) found that recruitment, staffing or selection was one of the most important critical practices to business performance. Stavrou-Costea (2005) added that appropriate selection of employees enables organizations to flourish, produce greater productivity, quality and gain higher profitability. Even though recruitment or staffing practices are different between large and SME firms (Tanova & Nadiri, 2005) in that the former adopts more formalized recruitment than the latter, staffing practices are crucial for both (Tanova, 2003). Ahmad and Schroeder (2002) also emphasized the importance of the recruitment practices because they determine the organizations' success. They noted that the selection process is one of the basic principles of strategic management as it works on the premise of 'prevention is better than a cure'.

Previous research found a positive relationship between **training and development** and firm performance (e.g., T.-C. Huang, 2001; Loan-Clarke, Boocock, Smith, & Whittaker, 1999; Marshall, Alderman, Wong, & Thwaites, 1995; Tzafrir, 2006). Even though training and development is recognized as an important HRM issue in small firms, it is a still neglected area (Storey, 2002, 2004; Westhead & Storey, 1996). This is because most employers often underestimate the benefit and cost of training to small firms as not being worthwhile (Storey, 2004; Storey & Westhead, 1997). In Malaysia, several managerial and technical training programs are provided by the government to assist SME development by improving the employees' knowledge and skills in order to produce superior output. In a similar vein, Stavrou-Costea (2005) suggested that every level of an organization should emphasize

training and development practices, as the continuous training and development activities can increase efficiency and flexibility of the employees in their work tasks.

2.6.3 Organization Innovation (OI)

2.6.3.1 Definition and Conceptualization of Organizational Innovation

Innovation is the lifeblood of businesses and organizations that are innovative in their practices tend to be one step ahead of their competitors. Evidence indicates that businesses that are aware of, continuously create, review, and manage utilization of new ideas, are more inclined to survive and succeed in the competitive global economy ("Survival through innovation", 2008). As SMEs face scientific and technology developments, globalization, and rapid changes arising from opportunities that exist in an economic environment, the capability to innovate is critical. According to Manole, Nisipeanu, and Decuseara (2014), smaller organizations are more innovative than larger organizations, although the execution of innovation is probably a bit slower because of the lack of resources. Due to a simple organizational structure, SMEs are generally faster, more responsive, and more flexible towards their dynamic environment. Besides, small-business owners or entrepreneurs often take the initiative and are willing to take risks in conducting their business. Therefore, small firms that grow quickly and dynamically are possible, and appear to be the main engine of innovation (Akman & Yilmaz, 2008; Love & Roper, 2015).

The World Bank analysis on SME Masterplan in Malaysia highlighted that innovation and technology adoption are the most important performance lever among

the six focus areas in achieving the goals set under the Masterplan (NSDC, 2012b). Accordingly, in 2012, the Government allocated a total of RM2.3 billion for the implementation of 28 key programs to promote innovation and technology adoption expected to benefit 1,167 SMEs (NSDC, 2012a). These programs are expected to produce significant result in improving the performance of SMEs.

Innovation is broadly regarded as the means of support for the organization to survive and grow (Baregheh, Rowley, & Sambrook, 2009; Mafabi, Munene, & Ahiauzu, 2015). Organizations that actively innovate, whether in new products or services, a new production of technology, a new structure, or administrative system, benefit in terms of performance (Damanpour & Gopalakrishnan, 2001; Damanpour & Schneider, 2006). Innovation is crucial in distinguishing a firm from competitors and might be able to generate a firm's competitive advantage (Choonwoo Lee, Lee, & Pennings, 2001).

In a general sense, organizational innovation is normally described as "the adoption of a new idea or behavior by an organization" (Daft, 1978, p. 197). It refers to the process of generating, developing, and implementing ideas or behaviors that were new to the organization at the time of adoption (Damanpour, 1991; Damanpour & Evan, 1984; Damanpour & Gopalakrishnan, 1998). This definition is broad enough to encompass a variety of innovations related to all aspects throughout the organization, including a device, system, process, policy, procedure, program, product, or service. In other words, it is a process of changing an organization to

adapt to the internal or external environment so that the organization can perform better (Damanpour, 1991).

Innovation is a broad field of studies (Damanpour, 1991) where different interpretations of innovation exist. Even though there are discrepancies in the concepts of innovation, innovativeness, capacity to innovate, and innovative capability, there are overlaps among them (Damanpour, 1991). For example, Hurt, Joseph, and Cook (1977) conceptualized firm innovativeness from two viewpoints; first, as a behavioral variable, i.e., the rate of a firm's innovation adoption, and second, as an organization's willingness to change. Hurley and Hult (1998, p. 44) introduced two constructs of innovation, which are innovativenesss to mean "openness to new ideas as an aspect of a firm's culture" and the capacity to innovate as "the ability of the organization to adopt or implement new ideas, processes, or products successfully". Tajeddini, Trueman, and Larsen (2006, p. 533) incorporated the approach of Hurley and Hult (1998) and observed that innovativeness is "the willingness and ability to adopt, imitate, or implement new technologies, processes and ideas, and commercialize them in order to offer new, unique products and services before most competitors".

Further, Avlonitis, Kouremenos, and Tzokas (1994) referred to organizational innovativeness as representing the latent capability to develop and implement new ideas, which consist of two crucial areas of technology and behavior. Wang and Ahmed (2004, p. 304) defined organizational innovativeness as "an organization's overall innovative capability of introducing new products to the market, or opening

up new markets, through combining strategic orientation with innovative behavior and processes." Similarly, Nasution and Mavondo (2008, p. 484) posited that innovativeness is an organizational capability in “generating new ideas, and their incorporation into new products, processes, and administrative procedures in order to deliver superior customer value relative to competitors”.

Based on the above literatures, organizational innovativeness can be viewed as organizational capabilities to innovate that are reflected through the characteristics and activities of innovativeness at the organizational level. According to Liao, Fei and Chen (2007, p. 348), innovation capability is defined as “the performance of the enterprise going through various types of innovation, and achieving an overall improvement of its innovation capability”, which include product innovation, process innovation, and personal innovation. Meanwhile, Wang, Yen, Tsai, and Lin (2008) and Subramaniam and Youndt (2005) further conceptualized innovative capability as having two major types, namely, incremental innovative capability and radical innovative capability. Akman and Yilmaz (2008) and Neely et al. (2001), on the other hand, defined innovative capability as the organization’s ability to generate innovative output, which is characterized by the innovative culture in an organization, the ability of internal processes, and the ability to understand and respond to the environment.

Based on the various definitions of innovation and following Che-Ha and Mohd-Said (2008; 2012) and Damanpour (1991), this study conceptualized organizational innovation as the extent to which the owners/managers of SMEs perceive that the

process of accepting, adopting and implementing new ideas in the organization is described by product, process and managerial innovations. The following discusses the three types of OI: product, process and managerial innovation used in this study.

2.6.3.2 Type of Organizational Innovation

2.6.3.2.1 Product Innovation

Product innovation is defined as new products or services introduced to meet external users or market needs (Damanpour, 1991; Damanpour & Gopalakrishnan, 2001). Wang and Ahmed (2004, p. 304) described product innovation as "the novelty and meaningfulness of new products introduced to the market at a timely fashion". This type innovation usually affects the end products or services offered by the organization (Nasution et al., 2011). Some researchers, such as Danneels & Kleinschmidtb (2001) and Wang and Ahmed (2004), viewed product innovation in two perspectives: the customers' perspective and the firms' perspective. The customer's perspective includes the characteristics of the level of changes, patterns and new or innovation attributes. Meanwhile, the firm's perspective contains the characteristics of environmental familiarity, technological and marketing (Danneels & Kleinschmidtb, 2001). In this study, product innovation was conceptualized as the extent to which the organization has introduced a new product and service, modified the existing products and services, opened new markets, had a variety of products and succeeded in new products and services compared to competitors (Che-Ha & Mohd-Said, 2008, 2012).

2.6.3.2.2 Process Innovation

Damanpour (1991) described process innovation as the use of new elements of inputs and systems introduced in the production or service operation in an organization. This includes new processes of production, as in the transformation of raw materials to the finished product and all supplementary activities (Damanpour, 1991; Damanpour & Evan, 1984; Damanpour & Gopalakrishnan, 2001). Basically, innovation embraces better quality or improves the quality of a product or service (Cassey Lee, 2004). For example, innovation includes changes in the input materials, task specifications, work and information flow mechanism, and equipments etc.

Process innovation is essential in the overall innovation capabilities, as it is the organization's capability in utilizing its available resources and proficiency and as well as reorganizing or reconfiguring the resources and proficiency to meet the creative production requirement, which might determine the organizational success and survival (C. L. Wang & Ahmed, 2004).

Following Che-Ha and Mohd-Said (2008; 2012), this study conceptualized process innovation as the extent to which the organization has introduced new elements such as inputs and systems to facilitate the processes of producing products and services, which include new strategies, new ways to finance the business, changes in the organizational structure, use of the latest equipment and software in production process from transforming raw materials to end-product, and all activities involved in accompanying the process.

2.6.3.2.3 Managerial Innovation

Managerial innovation or administrative innovation is defined as the adoption of new management systems, programs, procedures and techniques that influence the relationships among employees who work together to achieve a particular goal (Che-Ha & Mohd-Said, 2008, 2012; Damanpour & Evan, 1984). It is related to the changes in the methods of handling or operating a business (Nasution et al., 2011). It includes changes in policies concerning personnel recruitment, resources allocation, tasks structure, organizational structure, reward distribution, managerial process, staff development program and execution of information systems that support the organization communication and decision making (Damanpour, Szabat, & Evan, 1989; Kimberly & Evanisko, 1981).

In 1996, Damanpour published a paper in which he described that managerial innovation can be employed to minimize problems in controlling and coordinating an organization's units or sections, particularly in large organizations (Damanpour, 1996). Hence, managerial innovation was conceptualized as the extent to which the organization has new policy changes relating to employee attitudes, work practices, human relation practices, rewards distribution and application of good quality practices, which involve the adoption of modern techniques of management such as ISO, Good Manufacturing Practice (GMP), Total Quality Management, and quality circle (Che-Ha & Mohd-Said, 2008, 2012).

As the contribution of SMEs to national economy is important, it is imperative that they become more competitive and can survive in today's rapidly changing economic environment (Romijn & Albaladejo, 2002). For this reason, SMEs have to be innovative so that they can achieve the competitive advantage (Akman & Yilmaz, 2008). With innovative capability, SMEs can select, develop, work, sustain, modify, enhance, and expand technologies and products. The following explains the antecedents of innovation activities in organizations.

2.6.3.3 Antecedents of Organizational Innovation

Numerous antecedents of OI have been posited (Hult, Hurley, & Knight, 2004). According to Damanpour (1991), the antecedents can be grouped into three categories: (a) organizational members (leaders, managers, agents, and others); (b) the organization itself (size, structure, and others); and (c) extra-organizational (environmental factors). Other researchers identified the antecedents as follows: market dynamism (C. L. Wang & Ahmed, 2007); organizational culture, leadership organizational structure (Siengthai & Bechter, 2001); sophistication of HRM or HR practices, or strategic HR (e.g. Hashim, Ali, & Fawzi, 2005; Jimenez-Jimenez & Sanz-Valle, 2008; Lau & Ngo, 2004; Lopez-Cabrales, Perez-Luno, & Cabrera, 2009; Matthews, 2002; Shipton, Fay, West, Patterson, & Birdi, 2005; Shipton, West, Dawson, Birdi, & Patterson, 2006); market orientation (MO) (e.g. Hult et al., 2004; Keskin, 2006; Lin, Peng, & Kao, 2008; Mavondo, Chimhanzi, & Stewart, 2005; Medina & Rufin, 2009; Nasution et al., 2011; Rhee et al., 2010; Salavou, Baltas, & Lioukas, 2004; Salavou & Lioukas, 2003); learning orientation (LO) (e.g. Calantone,

Cavusgil, & Zhao, 2002; Keskin, 2006; Lin et al., 2008; Mavondo et al., 2005; Nasution et al., 2011; Salavou et al., 2004; Tajeddini, 2009); and entrepreneurship orientation (EO) (e.g. Avlonitis & Salavou, 2007; Hult et al., 2004; Lin et al., 2008; Nasution et al., 2011; Rhee et al., 2010; Salavou & Lioukas, 2003).

Of all the antecedents identified in the literature, learning orientation (LO), market orientation (MO), entrepreneurship orientation (EO), and HRM practices seemed to be the most considered. The following discusses them in detail.

2.6.3.3.1 Learning Orientation (LO)

Calantone et al. (2002) proposed that LO is an important antecedent of OI, which affects the consequences of an organization. Scholars agree that LO is associated with the development of new knowledge in organizations (Hurley & Hult, 1998). LO refers to "organization-wide activity of creating and using knowledge to enhance the competitive advantage" (Calantone et al., 2002, p. 516). The utilization of LO in innovations is believed to produce a greater process of innovations (Calantone et al., 2002). Researchers acknowledge four key components of LO. They are commitment to learning, shared vision, open-mindedness and intra-organizational knowledge sharing (Calantone et al., 2002; Hurley & Hult, 1998). However, there are no systematic studies that have been done in evaluating the LO and OI relationship, and sometimes the role of LO in the organizational innovation remains vague until now (Calantone et al., 2002).

2.6.3.3.2 Market Orientation (MO)

Hult et al., (2004) also suggested the relevancy of MO adaptation as one of the antecedents of OI. Atuahene-Gima (1996) mentioned that MO represents the activities and behaviors of organizations related to the marketing concept of philosophy, or market intelligence. In order to keep surviving in the business environment, organizations, particularly industrial organizations, tend to converge on their product, process, or administrative innovations depending on the requirements of the current market, which is naturally market-oriented (Hult et al., 2004). Even so, Atuahene-Gima (1996) pointed out that MO, in relation to OI, is a subject of debate, as some of the previous studies found negative correlations between MO and OI. Nevertheless, the MO and OI studies exist as attempts of finding vigorous factors or variables that would positively affect the organizations' innovation processes.

2.6.3.3.3 Human Resource Management (HRM)

As stated before, a profusion of studies have used HRM practices as the antecedents of OI (e.g. Hashim et al., 2005; Jimenez-Jimenez & Sanz-Valle, 2008; Lau & Ngo, 2004; Lopez-Cabrales et al., 2009; Matthews, 2002; Shipton et al., 2005; Shipton et al., 2006). According to Shipton et al. (2005), the globalization and combative business environment has inspired organizations to be proactive in their HRM practices as they lead to new innovations such as in products and technologies. HRM practices cover almost everything in the employment management of organizations,

as they are a system that attracts, develops, motivates, and retains employees to ensure the success and survival of organizations (Jackson & Schuler, 1995).

2.6.3.3.4 Entrepreneurial Orientation (EO)

Some entrepreneurial scholars combine the key concepts of EO with product innovativeness (Avlonitis & Salavou, 2007), whereas the EO is the key antecedent in evaluating the OI (Hult et al., 2004; Renko et al., 2009; Salavou & Lioukas, 2003). EO is primarily different from firm innovativeness, as firm innovativeness would not look into new market entry (Lumpkin & Dess, 1996). There are some concepts that consider the EO as driving innovative activities (Covin & Slevin, 1991; Tajeddini, 2010), which act as an intrinsic condition in entrepreneurship, that leads to the organization's success (Avlonitis & Salavou, 2007).

2.6.3.4 Consequences of Organizational Innovation

Researchers tend to agree that organizations innovate for better performance (Jimenez-Jimenez & Sanz-Valle, 2008; C. L. Wang & Ahmed, 2007). Heunks (1998) highlighted that organizational innovation adoption results in growth, productivity increase and profit of an organization. Yamin, Mavondo, Gunasekaran, and Sarros (1997) also stressed the increase in work productivity as one of the consequences of OI. Heunks (1998) found that between process, research and development (R & D), marketing, and product innovation, only process innovation stimulated higher

productivity. Additionally, the R & D innovations in medium-sized organizations promise better profits than others (Heunks, 1998).

Avermaete et al. (2003) mentioned the capabilities of innovation in influencing the economic, institutional, technological, and political environment performance. Ngah and Ibrahim (2009) also mentioned that the most important consequence of OI is the profits to the organization. By offering their new products or services at lower or better prices than their competitors, the opportunities to gain greater profits also become higher. Wu and Wang (2007) also asserted the consequence of OI in financial performance. They found that the available resources in the organization can be transformed into profits via dynamic capabilities and firm competitiveness.

2.6.3.5 HRM Practices and EO as an Antecedents

This study only employed two antecedents, i.e. HRM Practices and EO, because they are important in accelerating innovation activities (e.g., Hult et al., 2004; Jimenez-Jimenez & Sanz-Valle, 2008; Lopez-Cabrales et al., 2009; Nasution et al., 2011; Renko et al., 2009; Rhee et al., 2010; Salavou & Lioukas, 2003; Shipton et al., 2005; Shipton et al., 2006). Damanpour (1991) grouped the possible antecedents into two divisions—environmental and organizational factors, and it seems that the latter is argued to play a pivotal role in innovation (Vincent, Bharadwaj, & Challagalla, 2004). Additionally, of the organizational factors, HRM practices have been identified as the crucial antecedent of OI (Jimenez-Jimenez & Sanz-Valle, 2005; Shipton et al., 2005), and that HRM practices and OI might be an important mediator

in productivity (Kok & Hartog, 2006). However, until now, there are not many empirical studies on HRM and OI (Leede & Looise, 2005; Smith, Courvisanos, Tuck, & McEachern, 2010). Furthermore, several research gaps in the field remain. Firstly, only a few studies have evaluated HRM practices but on technological innovation. Secondly, most prior research works were conducted in Western countries and there is a lack of studies in other countries. Thirdly, most research focused on high-tech organizations (Yuan Li, Zhao, & Liu, 2006), and there is a lack of studies on SMEs (Kok & Hartog, 2006).

Overall, past studies have showed that HR has a significant impact on improving organizational performance, and that resources are the most versatile asset in the organizations (Lau & Ngo, 2004; Nasution et al., 2011). In a similar vein, Mavondo et al. (2005) also affirmed that human resources such as employee's skills are possibly the most precious strategic assets in organizations, and might positively impact organizational performance. The HR practices can not only be configured differently to achieve higher performance, but the different types of HR practices also generate different positive outcomes for the organizations, such as the financial and staff turnover (Lau & Ngo, 2004). Shipton et al. (2006) noted that as each of the practices has bearing on performance, the combination of the practices will result in better performance compared to only a single variable. HRM practices include: staffing, training and development, performance management or appraisal, compensation and reward system, career development, HR planning, employee participation, employee relations, work design, and job security etc. (Osman et al., 2011b).

The rationale for including EO as one of the antecedents of OI was to extend the 'strategic choice' perspective (Child, 1972). Entrepreneurial style can be a key determinant of innovations, especially for SMEs, since managers or top management plays an important role in influencing innovativeness in a firm (Avlonitis & Salavou, 2007; Salavou & Lioukas, 2003).

2.6.3.6 Organizational Performance as a Consequence of Organizational Innovation

A large number of empirical studies have examined the impact of OI on organizational performance (Avlonitis & Salavou, 2007; Baker & Sinkula, 1999a, 1999b; Jimenez-Jimenez & Sanz-Valle, 2008; Keskin, 2006; Kok & Hartog, 2006; Lopez-Cabrales et al., 2009; Rhee et al., 2010; C. L. Wang & Ahmed, 2007). Most researchers found a positive impact of OI on the overall performance of an organization (Yamin et al., 1997). Many measures of organizational performance have been considered such as share market, profitability, productivity, and customer satisfaction (Jimenez-Jimenez & Sanz-Valle, 2008), productivity and turnover (Kok & Hartog, 2006), marketing effectiveness, operational efficiency, and financial performance (Mavondo et al., 2005), profits, growth in sales, and market share (Hult et al., 2004), changes in market share, sale revenue and profits (Baker & Sinkula, 1999a, 1999b), and others.

The performance consequence of OI is not only relevant for larger organizations, but also SMEs (Kok & Hartog, 2006). In a meta-analysis of SMEs with less than 500

employees in the United States, Rosenbusch et al., (2011) found that the performance and innovation relationship was context-dependent. Factors such as the firm's age, innovation type, and cultural context influenced the innovation-performance relationship to a large extent. Their results also indicated that the correlation between innovation and performance was significantly higher in new ventures than in mature ventures.

2.6.4 Managerial Ties

2.6.4.1 Definition and Conceptualization of Managerial Ties

Developing informal managerial relationships in business is necessary to extend the chances of organizational success (Nahapiet & Ghoshal, 1998; Stam & Elfring, 2006). Luk et al. (2008) pointed out that the relationship might be between government officials, as well as between managers from other firms. This type of relationship, also known as social ties, contacts, and networks (Peng & Luo, 2000), social capital (Luk et al., 2008; Stam & Elfring, 2006), is believed to influence the performance of a business within its environment (Peng & Luo, 2000). The ties in an organization can be analyzed depending on the boundary it covers, or whether it is within the individual organizations (internal) or between them (external) (Partanen, Möller, Westerlund, Rajala, & Rajala, 2008). According to social network theory, managers with better interpersonal connections, or social ties within their internal and external environment (Stam & Elfring, 2006), have a tendency to receive extra income, are more quickly promoted and have better careers (Peng & Luo, 2000).

Social capital among business participants is a metaphor of advantage, whereby the chances to pursue their goals of interest are there when exchanging goods and ideas (Burt, 2000). Burt (2000, p. 348) referred to social capital as “the features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated action.” Cooke and Wills (1999, p. 219) noted that social capital is “a communal property involving civic engagement, associational membership, high trust, reliability, and reciprocity in social networks." Stam and Elfring (2006) showed that entrepreneurs who disproportionately maintained their social ties with other firms would face problems. Perhaps, the most serious problem is that the entrepreneurs who only depend exclusively on the intra-industry ties may suffer from a lack of alternative sources of knowledge and resources that can easily be found within their outside industries. Although an individual may be attached to their fellows and other individuals in an organization, the opportunities of economic exchanges and advantages are anywhere, and the extension of relationships may discount any career moves (Nahapiet & Ghoshal, 1998).

Basically, there are certain types of relationships that are important to an organization, and previous studies have concentrated more on external relationships as they have more positive influence on a business (Acquaah, 2007). The external relationships, namely, are ties with other managers, government officials and community leaders. The ties with other managers include executives at other firms. They can be suppliers, buyers, competitors, and/or others. The relationship between persons in authority could simplify requirements and identify new opportunities. As discussed by Peng and Luo (2000), good relationships with suppliers facilitate a firm

in getting quality materials, good services, and timely deliveries. Similar ties with the buyers may spur sales volume increases, reliable payments, and customer loyalty. Moreover, good relationships with executives from competing firms can increase the possibility of inter-firm (other firms) collaboration and minimization of uncertainties. The relationship also provides the seeking of resources, valuable information, and knowledge that can enhance business performance (Acquaah, 2007).

The interpersonal ties cultivated among managers and local officials can also be understood as inter-firm relationship, which leads to better firm performance (Peng & Luo, 2000). Because businesses need approval, whether for approving projects and/or allocating resources, from those in the authority, developing good relationships with the government officials may help in facilitating protocols or procedures related to the business requirement. The government officials, including political and bureaucratic leaders, can positively influence business implementation (Acquaah, 2007). Acquaah (2007) added that these government officials provide an easy access to any financial resources, opportunities for government projects and contracts, certification of standard levels, and distribution of new rules and regulation.

Cultural diversity requires that ties with community leaders are developed. The community leaders may be the local chiefs, religious leaders, ethnic leaders, village chiefs, or kings. For example, in Africa, the relationships with the community leaders are very beneficial in garnering resources and providing access to the valuable knowledge and information in the business (Acquaah, 2007). In fact, in such

community the power and authority normally lie in the hand of the community leaders, who create, maintain, enforce, control, and keep their community values. The community leaders also tend to hold religious rituals.

Since SMEs primarily have a flat and flexible structure, they can easily gain information and resources from customers, suppliers, strategic partners, government, and others on market trends and demand (S. Daud & Yusoff, 2010). By doing so, SMEs can develop their competitive advantage and attain better performance (Peng & Luo, 2000).

2.6.4.2 Managerial Ties, Social Capital and Social Networks Term Clarification

The terms of social capital and managerial ties are widely in use. Peng and Luo (2000) mentioned that managerial ties need to be embedded in social capital to improve the weak support and clarify distorted information in organizations. They added that managerial ties in a wide economy transition in a variety of countries can also provide more useful social capital. Similarly, 'social network' is a term often associated with managerial ties and social capital. It can be defined as "a set of nodes (e.g., persons, organizations) linked by a set of social relationships (e.g., friendship, transfer of funds, overlapping membership) of a specified type" (Laumann, Galaskiewicz, & Marsden, 1978, p. 458). Farinda et al. (2009) defined social networks or business networks as a way of carrying out economic activities through coordination and cooperation between organizations in order to share or change information or resources.

Building from this view, most researchers agree that social capital is embodied in the managerial social networks and ties development (Acquaah, 2007; Peng & Luo, 2000). Managerial social networks and ties refer to social networking of firm managers with external entities, including customers, suppliers, competitors, industry associations, markets, banks, and government officials (S. Daud & Yusoff, 2010; Le & Nguyen, 2009; Peng & Luo, 2000). Managerial networking relationships and ties with other organizations' top management and government can help an organization to succeed and survive (Peng & Luo, 2000).

A social network replicates the structure of prior relationships between people and organizations whereby, in the market, the structure can affect exchange of information (Burt, 2000). For example, the structure (social network) enables people in the network to select the best exchange by using available information within the networks for goods, sellers, buyers, and prices before making decisions. The network contagion and prominent mechanism of network describe social capital. However, instead of discussing the network contagion and prominent mechanisms as social capital, the studies up to date tend to discuss 'network' reputations and status in the field of economics (Burt, 2000). Lin (2001, as cited in Acquaah, 2007, p. 1238) defined social capital as "the sum of resources (actual or virtual) that accrue to an individual or organization as a result of the development of managerial or social networking relationships". It provides new ideas and directions of describing why certain individuals or organizations are more successful than others (Burt, 2000). The social capital, as stated by Acquaah (2007, p. 1238), can be "the managers' managerial and social relationships with suppliers, customers, trade or employee

associations, government political and bureaucratic institutions, and community organizations and institutions". Peng and Luo (2000) mentioned that social capital is embodied in managerial ties in that it is an important asset to the organization.

As discussed above, 'managerial ties' (e.g., Park & Luo, 2001; Peng & Luo, 2000), 'social capital' (e.g., Acquaah, 2007; Luk et al., 2008), 'social networks' (e.g., Burt, 2000), 'social connection' (e.g., F. F. Gu, Hung, & Tse, 2008), and 'relationships' (e.g., Dunfee & Warren, 2001) are all similar in that they refer to networking activities. However, the terms can have different meanings. Managerial ties constitute a relationship within the business field, while social network can be understood as the structure (nodes) and connectivity among related people, organizations, suppliers. Social capital, on the other hand, is a resource or asset (such as individuals, communities, nations and governments) that exists in social relations and networks (Leana & Van Buren III, 1999).

In this study the term 'managerial ties' conceptualized by Peng and Luo (2000), which represent the essence of ties and networks at the organizational level, was used. This conceptualization clarifies top management use of their ties and networks with partners and government officials for organizational purposes. Considering ties as the whole, the term 'managerial ties' proposed by Peng and Luo (2000) is acceptable. Additionally, this study focused on the impact of the overall relationships on organizational performance.

Within the context of this study, and following Luk et al. (2008) and Peng and Luo (2000), managerial ties were therefore conceptualized as the extent to which owners/managers of SMEs utilize social ties, networks and connections with other managers at their buyer, supplier, and distributor firms, as well as with relevant government officials (e.g., FAMA, MARA, MIDA, or others), SME support institutions (e.g., SME Corp, MITI, and MATRADE etc.) and financial institutions (e.g., SME Bank, Bank Pembangunan, Agro Bank and other financial institutions).

2.6.4.3 Importance of Managerial Ties to Organizational Performance

The effects of managerial ties on business performance are important, but relatively unexplored, particularly their relation to innovativeness (Luk et al., 2008). Previous empirical research has shown that social capital has direct and contingent effects on organizational performance (Acquaah, 2007). According to Peng and Heath (1996), in an economic exchange relationship, the greater the uncertainty level of a business environment, the higher the level of reliance on managerial networking relationships.

Farinda et al. (2009) also emphasized that business networking is a critical issue for SMEs, particularly in Malaysia, as an important factor for success. SMEs need to develop the strategic alliances and business relationship networking as an opportunity to gain competitive advantage for successful business construction (Saleh & Ndubisi, 2006). Competitiveness in the ties can be interpreted in terms of "improvement of business, innovation, and knowledge" (Cooke & Wills, 1999). Unsuccessful managerial ties might lead to business failure, as found by Biggs and

Shah (2006). Their study of SMEs in Sub-Saharan African countries indicated that market failures were influenced by the lack of business relationships. They concluded that business relationships are important to raise productivity, improve access to finance, facilitate information flow, and enhance coordination of business activities in organizations (Biggs & Shah, 2006).

Peng and Luo (2000) found that managerial ties in smaller firms, service firms, and firms in low-growth industries affected more organization performance that those in larger firms. Additionally, they showed that ties between officials were more important than between managers in other organizations, concluding that the organizations might have a greater resource dependency on officials than on other organizations. Cooke and Wills (1999) investigated the influence of government program in three countries: Denmark, Wales, and Ireland, in encouraging managerial ties for SMEs through networking and collaboration. They found that a significant portion of the SMEs showed improvements in their business performance.

2.7 Gaps in the Literature

Western researchers have discovered that HRM practices have a positive effect on organizational performance (e.g. Collins & Clark, 2003; Delaney & Huselid, 1996; Delery & Doty, 1996; Huselid, 1995; Ichniowski et al., 1997; Lepak & Snell, 2002; Macduffie, 1995; Panayotopoulou et al., 2003; Stavrou-Costea, 2005; Uysal, 2008; Way, 2002; Youndt et al., 1996). However, many researcher works are still needed in the future so that previous findings can be further strengthened and validated (Arthur

& Boyles, 2007; Cardon & Stevens, 2004; Fleetwood & Hesketh, 2006; Way, 2002), especially given that the majority of studies revealed different findings across countries, implying that different cultures (Bjorkman, Fey, & Park, 2007; Foley, Ngo, & Loi, 2012; Rowley et al., 2004) and size of the organization (Heneman, Tansky, & Camp, 2000; Hornsby & Kuratko, 2003) may be at play.

While studies on HRM-performance links have been conducted in various non-Western countries like China (Law, Tse, & Zhou, 2003), Taiwan (W.-J. A. Chang & Huang, 2005), Korea (Bae & Lawler, 2000), Vietnam (Thang & Quang, 2005), Thailand (Wattanasupachoke, 2009), India (Budhwar & Boyne, 2004), Russia (Fey, Björkman, & Pavlovskaya, 2000), and Israel (Harel & Tzafrir, 1999), they tend to focus on large organizations and a few looked at the impact of HRM practices on organizational performance in SMEs (Heneman et al., 2000; Hornsby & Kuratko, 2003). In this regards, Tansky and Heneman (2003) claimed that SMEs have long been treated as second-class citizens by HRM researchers. In their in-depth qualitative study of the HRM practices issues that challenge the creation and growth of SMEs, Heneman et al. (2000) found that only 129 of 403 articles explicitly addressed issues of HRM in small businesses. Of the 129 articles, only 17 articles had a specific hypothesis to be tested, and hence signify future research opportunities on HRM practices in SME.

Several studies considered diverse HR practices in SMEs (Cassell et al., 2002; Golhar & Deshpande, 1997; Hornsby & Kuratko, 2003), whereas others concentrated on individual HRM practices, for instance, recruitment and selection (Tanova, 2003),

training and development (Macpherson & Jayawarna, 2007), performance appraisal (Jackson, Schuler, & Rivero, 1989), compensation (Carlson et al., 2006) and employee relations (Matlay, 1999). Literatures also tend to indicate that the use of HR practices is relatively less in smaller firms than in larger firms. Moreover, SMEs also treat HRM practices in an *ad hoc* and informal manner (De Kok & Uhlaner, 2001) due to their limited size and resource availability such as finance, time, and HR experts (Klaas et al., 2000).

Studies on HRM-performance links in Malaysia also appear to share the same pattern in that they mostly focused on large organizations (e.g. N. Daud, 2006; Hemdi, 2005; Osman et al., 2011b; A. E. A. Othman, 2009; R. Othman et al., 2001; Rowley & Abdul-Rahman, 2007). Even if there are studies on SMEs, they do not focus on the effect of HRM practices on performance (e.g. Chelliah, Sulaiman, & Yusoff, 2010; Farinda et al., 2009; Hashim & Zakaria, 2010; Hilmi & Ramayah, 2008; Jajri & Ismail, 2009; Radam, Abu, & Abdullah, 2008). For example, in Malaysia, most of the SME studies focused on financing (Rozali, Taib, Latif, & Salim, 2006; Zabri, 2009), knowledge management (S. Daud & Yusoff, 2010) internalization (Chelliah et al., 2010), building business networking (Farinda et al., 2009; Zain & Ng, 2006), technology efficiency (Jajri & Ismail, 2009; Radam et al., 2008), business strategy (Hashim, 2000; Hashim & Zakaria, 2010), distinctive capabilities (Man & Wafa, 2007, 2008), and innovation (Che-Ha & Mohd-Said, 2012) and their effects on business performance.

Due to the limited number of studies on HRM-performance link in SMEs, it is necessary that more studies are carried out to strengthen theories in HRM that include all conditions such as organizational size and structure (Heneman et al., 2000). Indeed, Subramaniam et al. (2011) argued that to what extent the existing theories are applicable to SMEs is yet unclear since most of the HRM theories, such as transaction cost theory, agency theory, resource dependence theory, behavioural theory and institutional theory, are developed in the context of larger organizations. This view is supported by Cardon and Stevens (2004) and Chandrakumara (2013), who reviewed the literatures on HRM practices in SMEs. They concluded that there is limited understanding of the significant roles of HRM in small and emerging firms.

However, recent studies have revealed the importance of HRM for SMEs. For instance, a study in the USA revealed that one key reason for business failure in SMEs is less emphasis on human resources (Baron, 2003). Huang and Brown (1999) also found that apart from sales/marketing, human resource management is another area that is problematic for small businesses. This view is further supported by other researchers who argued that HR practices in smaller firms are expected to be as sophisticated as large organizations (Bacon, Ackers, Storey, & Coates, 1996; Golhar & Deshpande, 1997; Hornsby & Kuratko, 1990). Some even contended that there should be no significant differences between HR issues in large and small firms (Golhar & Deshpande, 1997; Hornsby & Kuratko, 1990). Bacon et al. (1996) asserted that small business managers should place importance to new approaches of management for small business success such as teamwork, job flexibility,

decentralization, and performance appraisals, etc., and that innovative and progressive HR practices are no longer limited to large organizations. These approaches have been shown to have significant implications for the success of small firms (Bacon et al., 1996; Jones, Knotts, & Scroggins, 2005).

In Malaysia, recent studies have emerged on the importance of HRM to the success of companies (Abdullah et al., 2009). For instance, Ismail (2006) focused on the effect of human capital attainment on labor productivity growth in SMEs. Hamid, Baharun, and Hashim (2006) found that SMEs in general seemed to have lower understanding of the variety of management practices. Jamaludin and Hasun (2007) conducted a study on the importance of staff training toward SME performance, and Osman et al. (2011a) examined the extent of adoption of HR practices in Malaysian SMEs in the service sectors. The increasing number of studies on HRM practices in SMEs may reflect the recognition by the Malaysian government on the critical role of such practices play in achieving Vision 2020 (Abdullah et al., (2009). However, according to Hassan (2010), the utilization and adoption of HRM practices are still limited in SMEs in comparion to multinational companies operating in Malaysia. Omar et al. (2009) pointed out that HRM practices are key for SME long-term survival. According to Omar et al. (2009), evidence shows that small organizations lack the motivation to compete. Thus, the SMEs need the HRM practices to motivate, attract, and train their employees for their business survival.

Despite the fact that studies on HRM in Malaysian SMEs are beginning to emerge, the field of HRM in this context is still at the stage of infancy (Abdullah et al., 2009;

Lo et al., 2009). Hornsby and Kuratko (2003) also mentioned that HR-related practices, behaviors, and outcomes are less understood in smaller firms. Heneman et al. (2000, p.22) also proposed that "SMEs may be an excellent place to study synergistic human resource management practices." Given the gaps identified, a study on HR practices and their outcomes in the context of Malaysian SMEs was justified.

With regard to the EO, prior studies have shown that EO positively affects SMEs business performance (Y. Li, Zhaou, Tan, & Liu, 2008; Moreno & Casillas, 2008; Runyan, Droge, & Swinney, 2008; Wiklund & Shepherd, 2005). Even though EO has been widely investigated in studies on SMEs, it is still currently relevant in the context of organizational performance. This is because EO is important in designing firm-level strategies (Hart, 1992; Lumpkin & Dess, 1996; Rauch et al., 2009). In fact, according to Rauch et al. (2009, p. 763), EO represents "the policies and practices as a basis for entrepreneurial decisions and actions". As such, it reflects on how a firm operates, rather than what it does (Lumpkin & Dess, 1996).

To the researcher's knowledge, there are a few studies that integrated EO with HRM practices. For example, Nasution et al. (2011) revealed that the interaction of entrepreneurship and HRM practices had a significant impact on innovation and customer value. They also suggested that effective human resource practices are needed in optimizing the benefits of entrepreneurship to innovation. Meanwhile, only one study in Malaysian SMEs integrated EO with HRM practices. Kwang et al. (2008) analyzed the effect of EO and HRM practices on the organizational learning

(OL) capability of 256 manufacturing and services SMEs in Sarawak. They revealed that EO and HRM practices had direct positive effects on OL capability of SME and HRM practices served as a mediator in the relationship between EO and OL capability. This finding suggests that HRM practices should be integrated with EO in fostering strong OL capabilities in SMEs. Due to the scarce studies, there is a need for more research to fill the gaps (Baron, 2003; Barrett & Mayson, 2006; Katz, Aldrich, Welbourne, & Williams, 2000).

Many studies have also focused on the direct relationship between HRM and performance and found a strong relationship between the two (Bae & Lawler, 2000; Guest, 1997; R. Othman et al., 2001). The strong relationship has driven further research to identify the mechanism through which such relationship exists. Researchers in organizational theory tend to agree that organizational innovation positively impacts organizational performance. Nonetheless, what predicts organizational innovation and how the predictors influence organizational performance through organizational innovation have not been clearly investigated, particularly in the context of SMEs (Lin et al., 2008). More specifically, previous studies have shown the significance of HRM practices in achieving competitive advantage, but few studies have examined how HRM practices and EO interact to enhance organizations to be innovative, and subsequently performance.

HRM is a critical antecedent of innovation activities. Even though studies on the effects of HRM and organizational innovation on performance are limited, researchers believe that both are important in accelerating organizational

performance (Lau & Ngo, 2004). A good HRM system assists the organization to manage its human resources to obtain better performance (A. E. A. Othman, 2009). However, scholars are also of the opinion that organizations need to be proactive in their HRM practices to achieve competitive advantages in the business environment (Shipton et al., 2005). Despite previous literature highlighting the central role of HRM in the innovation process, to date, HRM receives slight attention in the field of innovation. Furthermore, there is a lack of empirical studies on the relationship between HRM and innovation (Jimenez-Jimenez & Sanz-Valle, 2008; Laursen & Foss, 2003).

From the above discussions, innovation activities are considered a catalyst to enhance organizational performance (Jimenez-Jimenez & Sanz-Valle, 2008; Vincent et al., 2004). However, very few studies looked into the antecedents and outcomes of innovation (Vincent et al., 2004). To the researcher's knowledge, a few studies have examined organizational innovation as the main mechanism through which EO and HRM practice enhance organizational performance (Avlonitis & Salavou, 2007; Jimenez-Jimenez & Sanz-Valle, 2008; Vincent et al., 2004). Given this limitation in the literature, this study investigated how the implementation of EO and HRM practices affects organizational performance, with organizational innovation as the mediating variable.

Literatures also indicate that the direct relationship between organizational innovation and performance is not that strong. Although studies did find positive relationships, some contingent factors may be useful to strengthen the relationship

(Lumpkin & Dess, 1996; Stam & Elfring, 2008). According to Rosenbusch et al. (2011), previous studies on the impact of innovation on performance were undertaken in large organizations. Because innovation requires substantial resources, this certainly will be an impediment for SMEs to innovate (Rhee et al., 2010). In addition, innovation also reflects the uncertainties and risks, which are all a challenge for SMEs because innovation has a high risk of failure (Berggren & Nacher, 2001; Vossen, 1998). This implies that SMEs need additional support to ensure that they continually strive to innovate and subsequently perform. Therefore, developing good relationships with other organizations and the government is essential to enhance their innovative capability.

A number of studies have included moderators on innovation and performance relationships. For example, Lin et al. (2008) considered organizational structure as a moderator. However, they failed to show that organizational structure (formalization and decentralization) played a moderating role in the relationship between innovativeness and business performance. Hult et al. (2004) found that the role of market turbulence did not provide any significant difference on the effect of innovativeness on business performance. However, Sher and Yang (2005) concluded that R&D clustering at low and moderate levels enhanced more the relationship between innovative capability and performance in Taiwan's semiconductor industry.

Similarly, McDermott and Prajogo (2012), in their study on service innovation and performance in SMEs, demonstrated that organizational size strengthens the effect of

exploration innovation but reduces the effect of exploitation innovation on performance. In sum, organizational innovation alone may not be sufficient to affect the performance of organizations. In this regard, managerial ties could either strengthen or weaken the innovation-performance relationship. Innovation activities enhance competitiveness and performance, and ties (for example, between customers or suppliers) are important to maintain success (Cooke & Wills, 1999). In a similar vein, Luk et al. (2008) emphasized that in fostering innovations, organizations need to consider their ties or networks within the business environment. Even though scholars argue that managerial ties have an effect on organizational inovation and performance, studies in this area are still new (Luk et al., 2008). Hence, investigating the moderating role of managerial ties was justified.

Organizations, particularly SMEs, need to develop close relationships with government officials for their business success (Cooke & Wills, 1999) as these officials act as informers, helpers and facilitators. They provide tax rate information, local content requirements and bankruptcy laws (Luk et al., 2008). Zeng, Xie and Tam (2010) highlighted that networking is extremely important to SMEs as it can lead to knowledge and complementary competencies shared within their network of relationships. In sum, the literatures indicate that managerial ties are crucial to innovation activities, particularly in SMEs, to achieve better performance (Farinda et al., 2009; Le & Nguyen, 2009; Peng & Luo, 2000). In other words, innovations are somehow affected by the managerial ties to achieve success.

Based on the above discussion on the existing gaps in the literatures, this study investigated the mediating effect of organizational innovation and the moderating effect of managerial ties on EO, HRM, and performance relationships in SMEs.

2.8 The Underlying Theory of Organizational Performance: The Resource-Based View

Resource-based view (RBV) has emerged as one of the most important frameworks in explaining how firms can gain competitive advantages (Barney, 1991; Barney & Arikan, 2001; Fahy, 2000; Peteraf, 1993; Wernerfelt, 1984). RBV proposes that the key to competitive advantage and performance is powerful resources (Runyan, Huddleston, & Swinney, 2007). In essence, RBV centres on the ability of the firm to use its internal resources to compete (Hitt, Ireland, & Hoskisson, 2001).

According to resource-based view (Barney, 1991; Wernerfelt, 1984), a firm is believed to gain a competitive advantage when it performs value-creating strategies that are not simultaneously performed by its competitors and sustain their competitive advantage when other firms could not imitate the advantages of the strategy. Even though not all resources can be a source of competitive advantages and performance (Clulow, Barry, & Gerstman, 2007; Ray, Barney, & Muhanna, 2004), there are four key attributes that must be fulfilled by a resource to achieve the criterion. The resources must be valuable (worth something to the firms), rare (unique, are not implemented in any other firms), imperfectly imitable (cannot be easily copied), and non-substitutable (cannot be easily sold or traded) (Barney, 1991). Hence, a firm's physical, human and organizational capital that allow the firm

to consider and carry out strategies that can lead to organizational efficiency and effectiveness are called organizational resources (Barney, 1991).

Organizational resources are defined by Barney (1991) as all assets, including tangible and intangible, capabilities, processes involved in the organization, attributes of the firm, information, knowledge, etc. that are regulated by the organization, and which allow a firm to think about and execute the strategies that can increase the efficiency and effectiveness of the organization. Generally, organizational resources are the strength of a firm that could be developed, selected and able to support the implementation of organizational strategies. Barney (1991) and Wernerfelt (1984) broadly categorized organization resources into three, namely, physical capital, human capital, and organizational capital. Physical capital resources refer to assets that are tangible, including physical technologies employed in the firm, facilities or equipment, geographic site, and the accessibility to raw materials. Human capital resources include the training, experience, judgment, intelligence, relationships, and the insight of individual managers and employees in a firm. Meanwhile, organizational capital resources are those intangible assets, including a formal reporting structure of firms, formal and informal planning, controlling and coordinating systems, and the informal ties between the groups in the firms, and between the firm and individuals in its surroundings as well.

Nahapiet and Ghoshal (1998) and Youndt and Snell (2004) highlighted that social capital resources are an equally important resource to the organization. Social capital is an intermediary form of the intellectual capital of the organization. It refers to the

specific parts of intangible assets that are derived from the firm's abilities and capabilities to develop and maintain good networks with others, such as, employees, stockholders, customers, and other organizations (Takeuchi, 2003). In this study, social capital is embodied in the managerial social network and ties (Acquaah, 2007; Peng & Luo, 2000).

Fahy (2000) added capabilities as the third category of resources (in addition to tangible and intangible resources). But Siqueira and Cosh (2008) differentiated resources from capabilities. The primary differences between them are that resources are independent, simple and static as compared to capabilities, which are collective, complex and dynamic (Martín-de-Castro, Navas-López, López-Sáez, & Alama-Salazar, 2006). A capability is viewed as being embedded in an organization and are non-transferable, and subsequently can increase the efficiency and effectiveness of other resources owned by the firm (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). According to Amit and Schoemaker (1993, p. 35), capabilities refer to "a firm's capacity to deploy the resources, usually in combination, using organizational processes to affect the desired end". Capabilities are more difficult to be delineated and are often specified as invisible assets (Fahy, 2000). Examples of capabilities include teamwork, organizational culture, and trusts between management and workers.

Previous studies have revealed that RBV is applicable to SMEs (Hoq, Ha, & Ali, 2008; Runyan et al., 2008). According to Rangone (1999), RBV is appropriate for SMEs for the following reasons: (a) it is not time-consuming, not too complex, and

does not force the firm's members and management to concentrate on certain high-impact variables that would influence the firms' long-term competitive advantage; and (b) the deployment of RBV does not need specialist skills in strategic analysis or sophisticated information systems. Besides, RBV provides a framework for the SMEs to strategize based on their superior resources to gain competitive advantage and increased performance (Runyan et al., 2007). However, little work has been done to expose the resources that can be utilized to gain success in the SMEs.

2.8.1 How does RBV relate to this study?

RBV postulates that a firm has a unique compilation of resources, which can be largely divided into tangible, intangible, and capabilities (Barney, 1991; Clulow et al., 2007; Fahy, 2000; Wernerfelt, 1984). RBV proposes intangible resources as key factors for the success of a firm (Amit & Schoemaker, 1993; Barney, 1991) because such resources can support more comprehensive activities than tangible resources. Furthermore, scholars argue that intangible resources are even more important strategically because they are valuable, rare, and hard to replicate, which enable a firm to gain sustainable competitive advantage (Barney, 1991; Hitt et al., 2001). In addition, SMEs generally lack tangible resources. Therefore, this study focused on organizational resources, which include intangible resources and capabilities. In this study, organizational resources describe firm-specific resources and capabilities, namely, entrepreneurial orientation (EO), HRM practices, organizational innovation, and managerial ties.

RBV is a relevant theoretical framework for this study that describes how SMEs fully utilize their bundle of resources and capabilities in order to achieve competitive advantage, and hence improve their organizational performance. This study proposed that organizational resources such as EO, HRM practices, and managerial ties would influence the strategic capability of SME, and eventually SME performance. In this study, the strategic capability was organizational innovation. In addition, this study also hypothesized that the capability of an organization to develop and maintain good relationships with other firms and officials (managerial ties) further enhance the effect of organizational innovation on performance.

The first element of resources in this study was EO. Bakar and Ahmad (2010) pointed out that EO is a human intellectual resource that leads to competitive advantage. EO provides a valuable insight into the managers' role in the environment of a firm and it is important for the success of today's firms (Davis et al., 2010). Even though EO is defined as an individual-level resource, in the SME context EO can be considered an organizational resource. This is because the owners/managers of SME are often the founder or top management of the organization. Thus, their style of thinking, characteristics, or behavior reflects the behavior of the organization (Covin & Slevin, 1991; Davis et al., 2010; Lumpkin & Dess, 1996). EO apparently is very crucial in the strategy-making process. Rauch et al. (2004) suggested that the EO is important for firms to enact their purposes, sustain their vision, and create their competitive advantages. Previous studies have revealed that EO enables firms to achieve superior performance (Kreiser & Davis, 2010). EO contains unique elements, namely, proactiveness, innovativeness and risk taking. In the current

challenging business environment, proactiveness, innovativeness, and risk taking are needed to sustain competitive advantages and hence business success (Kreiser & Davis, 2010).

The second element of organizational resources in this study was HRM practices, which are classified as organizational capital resources. Even though human resource is considered the basis to achieve the competitive advantage, its potential does not exist without the presence of an effective HRM system (Jackson & Schuler, 1995; Pferfer, 1994; Schuler & MacMillan, 1984). Karami, Analoui, and Cusworth (2004) found that HRM practices were one of the key sources of sustainable advantages and performance. Similar points of view were shared by Chadwick and Dabu (2009), and Khandekar and Sharma (2005). HRM practices can be unique, causally ambiguous, and synergistic in how the firms enhance their competencies (Barney, Wright, & Ketchen, 2001; Lado & Wilson, 1994). Therefore, it is impossible to imitate such resource (Lado & Wilson, 1994; Wright, Dunford, & Snell, 2001)

The third element of organizational resources was managerial ties. Past studies have shown that networks or managerial ties or social capital of a firm are positively correlated with competitive advantages and performance (Hoq et al., 2008; Runyan et al., 2007). Barney (1991), in his study, discussed the importance of a positive reputation of a firm between its customers, suppliers and stakeholders. Reputation mentioned in his study referred to managerial ties. Managerial ties refer to social networking of firm managers with external entities, including customers, suppliers, competitors, industry associations, markets, banks and government officials (S. Daud

& Yusoff, 2010; Le & Nguyen, 2009; Peng & Luo, 2000). The reputation among the groups can be a crucial resource to develop sustainable competitive advantages. If firms have a reputation, it is rare; if the reputation is likely to be socially complex, it is imperfectly imitable; if the reputation guarantees a long-term contract, it cannot be substituted (Barney, 1991). Rangone (1999) also categorized networks in a business environment (for example, customer relationships) as one of the crucial resources that must be thoroughly considered, particularly in the SMEs. She said that a firm that endorses adequate critical resources will be able to develop sustainable competitive advantages and hence superior performance.

In addition, this study identified organizational innovation as an element of organizational capability, which is vital to SMEs to achieve strategic competitiveness. Previous innovation research classified organizational innovation as strategic capabilities of a firm to innovate (Garcia-Morales, Llorens-Montes, & Verdu´-Jover, 2006, 2007). The capability of a firm to innovate, particularly the SMEs, allows it to enhance competitive advantages (Calantone et al., 2002; C. L. Wang & Ahmed, 2004). Organization innovative capability is also closely related to organizational learning, and a firm requires a strong learning orientation to gain competitive advantages (Calantone et al., 2002). Empirical evidence shows the positive impact of organizational innovation on performance (Jimenez-Jimenez & Sanz-Valle, 2008), and many researchers found that the innovative capability of the firm had a powerful influence on performance (Akman & Yilmaz, 2008; Romijn & Albaladejo, 2002). Specifically, innovations enable SMEs to develop a wide range of

valuable, rare, inimitable and differentiated products, which lead to improved firm performance.

2.8.2 Supplementary Theory: Social Capital Theory

As discussed earlier, the theoretical logic underpinning this study was RBV of a firm, which proposes that firms can gain a sustainable competitive advantage as far as they are able to take advantage of their unique, valuable, rare, inimitable, and non-substitutable resources. However, as this study also considered the moderating effects, the following theories were used to supplement RBV.

Numerous theories such as social capital theory, social network theory, resource-based view, relational governance, etc. have been employed to explain social ties and network-performance link. According to social capital theory (Adler & Kwon, 2002; Burt, 1992), social ties enable valuable resources to be accessed and applied to attain various positive outcomes for the organization. Social capital is defined as the aggregate of resources embedded within, attainable through and developed from network ties owned by individuals or organizations (Inkpen & Tsang, 2005; Nahapiet & Ghoshal, 1998). Social capital generated from the basics of social relations can also be activated in order to make possible actions (Adler & Kwon, 2002). Thus, social capital theory acknowledges the value of social ties among individuals and organizations and hypothesizes that ties may provide significant beneficial results (for instance, improved reputation, preferential opportunities and privilege of accessing information and knowledge, etc.) (Inkpen & Tsang, 2005).

There are three benefits of social capital, as summarized by Adler and Kwon (2002). First, social capital assists in accessing wider information sources and gives improved quality and relevance as well as rightness of information. Second, social capital gives influence, control, and power that enables organizations to perform and achieve their goals. Third, social capital provides solidarity arising from strong social norms and beliefs, to promote compliance with national regulations and reduce formal control requirement. The benefit of information (via the flow of information), control (via the flow of resources) and solidarity (via reciprocal cooperation) can be obtained by managers and organizations through sustained and accumulated social capital developed from their social ties. These benefits enable the organization to function and compete more efficiently and effectively, which is valuable for organizational performance. Applying social capital theory to managerial ties in SMEs, it is expected that social capital will be transferred to the organization through social ties and networks established by managers with other managers and government officials. This is because managerial ties relate to the extent to which managers have utilized their ties and networks to exchange favors and reciprocal obligations for the purpose of the organization (Peng & Luo, 2000).

2.9 Summary

This chapter reviewed the concepts, constructs and relationships under investigation. It described the relationship between entrepreneurial orientation and HRM practices on organizational innovation and subsequently organizational performance. The importance of organizational innovation as a mediator and managerial ties as a

moderator between the studied variable was reviewed. Furthermore, this chapter specifically discussed resource-based view, which was used as a theoretical basis for this study to formulate the hypotheses of the study. The following chapter describes the research model and the development of hypothesized relationship.

CHAPTER THREE

RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

3.1 Introduction

This chapter explains the research model of the study, followed by the theoretical rationale and empirical support to exhibit the relationships between the studied variables. It also summarizes the proposed hypothesized relationships.

3.2 Research Model

Based on the review of literature on entrepreneurial orientation, HRM practices, organizational innovation, managerial ties and organizational performance, the research model for this study is presented in Figure 3.1. The model indicates that entrepreneurial orientation and HRM practices are associated with organizational performance. It also indicates a mediator role of organizational innovation in the relationship between HRM practices and organizational performance. Managerial ties is shown to moderate the correlation between organizational innovation and organizational performance. The hypothesized relationship was based on resource-based view that suggests firms are able to achieve better performance through the effective use of their organizational resources and capabilities compared to their

competitors. Organizational innovation is a strategic capability that can affect organizational performance.

In general, there are eight direct relationships and eight indirect relationships. Basically, the research model postulates that the owners/managers' perceptions of an organization's entrepreneurial orientation and HRM practices will directly and positively influence organizational innovation, which will directly and positively influence organizational performance. The model also postulates that organization innovation mediates the relationship between the perceptions of HRM practices and the performance of the organization, whilst managerial ties act as a moderator in the relationship between organizational innovation and organizational performance. Figure 3.1 shows the specific relationships in the model.

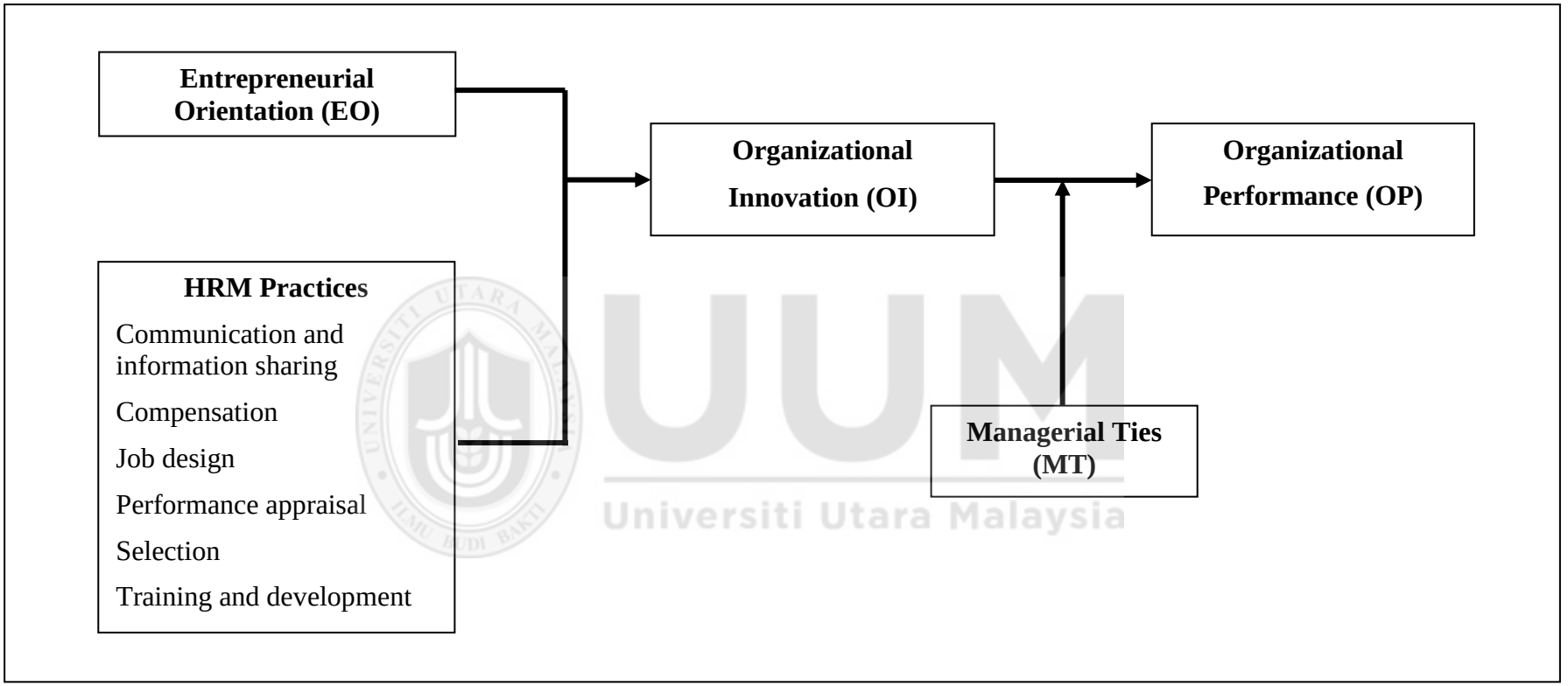

Figure 3.1
Research model

3.3 Research Hypotheses

Several research hypotheses were developed based on the research model shown in Figure 3.1. The following discusses them.

3.3.1 Relationship between EO and Organizational Innovation

Lee and Hsieh (2010) contended that EO drives innovative actions in an organization, consistent with the 'strategic choice' perspective (Child, 1972). The entrepreneurial style can be a key determinant of innovations, especially in SMEs, because of top management's role in influencing such acts (Avlonitis & Salavou, 2007; Salavou & Lioukas, 2003). Previous studies found that EO was directly related to innovative culture and activities. Owners/managers of SMEs that have EO generally possess the capacity to introduce innovation in the process, product, or idea in their organization (e.g. Avlonitis & Salavou, 2007; Rhee et al., 2010; Salavou & Lioukas, 2003). Salavou and Lioukas (2003) also found that EO in SMEs was more important than MO and technology policy in promoting aggressive behaviour toward innovations.

Specifically, innovativeness in SMEs reflects "a willingness of the owners to learn about and to adopt innovations, both in the input and output markets" (Verhees & Meulenberg, 2004, p. 138). Innovativeness in EO domains captures the innovativeness of the owners/managers who support new ideas, creativity processes, experimentation, novelty, and technological leadership in running their business. As

described by Verhees and Meulenberg (2004), innovative managers or top management prefer working differently from existing practices. They normally have an open mind in accepting new things, especially in solving problems. Due to the constraints of resources and capabilities within SMEs, the owners/managers should display higher commitment in supporting new development of products, processes, and new ways of working (Laforet & Tann, 2006). Additionally, innovation orientation could indirectly foster a culture of stimulating innovation that may develop the innovative capability of the organization (Branzei & Vertinsky, 2006; Hurley & Hult, 1998; Rosenbusch et al., 2011). In conclusion, to be successful in implementing innovation within an organization, the owners/managers have to develop a strategic orientation. Strategies for innovation are necessary to ensure the development of innovative capability in the organization, which will lead to innovation success (Branzei & Vertinsky, 2006; Laforet & Tann, 2006; Lawson & Samson, 2001; Zhou, Gao, Yang, & Zhou, 2005).

Proactiveness is conceived by "top management's willingness to carry out actions before competitors" (Salavou & Lioukas, 2003, p. 99). According to them, proactiveness requires managers or top management to be more proactive, and capable of carrying out actions towards opportunities and new development and production before the competitors. The top management is responsible to initiate changes in an organization by being proactive in seeking new opportunities and innovations (Hult et al., 2004). Miller (1983) viewed proactiveness as a facet of assertiveness, which is related to their decision-making strategies being greater than their competitors. Salavou and Lioukas (2003) found the great capabilities of

proactive behaviour in performing innovations. They highlighted that both proactiveness and risk taking are essential, particularly in SMEs wanting to be innovative.. Hult et al. (2004) also conceptualized that proactiveness is important to exploit opportunities in a business environment.

Risk-taking is "comprehended by top management as a preference to undertake activities of high or low risks" (Salavou & Lioukas, 2003, p. 100). The managers and top management need to be brave in taking risks and to undertake activities that have either a high or low impact on the organization. Thus, to succeed, organizations should be risk takers in allocating more resources (Wiklund & Shepherd, 2005), innovate (Avlonitis & Salavou, 2007) or commercialize their innovations (Kaufmann & Tödtling, 2002). An entrepreneurial business needs to behave according to entrepreneurial manner in order to expand the organization's success (Lumpkin & Dess, 1996). Avlonitis and Salavou (2007) and Salavou and Lioukas (2003) argued the capabilities of risk taking as to whether it can increase the level of newness of product innovations in an organization. However, in their study, Salavou and Lioukas (2003) found that the higher the capability of risk taking, the higher the intention to launch more radical product innovations. Taken together the above studies, the following hypothesis was formulated:

H1: Entrepreneurial orientation is positively related to organizational innovation.

3.3.2 Relationship between HRM Practices and Organizational Innovation

HRM can predict innovations behavior in an organization (Damanpour & Gopalakrishnan, 1998). The effective management of a firm's human resources can promote enormous innovations from the employees by encouraging the behavior of 'creation and execution of knowledge' (Shipton et al., 2005). Jiménez-Jiménez and Sanz-Valle (2005) and Shipton et al. (2005) also agreed that HRM practices are a crucial input for OI. Nasution et al. (2011) stressed that the HRM practices are critical in the development of innovation, as well as in customer value, particularly in service innovations. Additionally, through effective HRM practices, employees will also be encouraged to experiment with new ideas, develop knowledge and implement changes in the organizations (Tan & Nasurdin, 2010).

Similarly, Conway and McMackin (1997) and Smith et al. (2010) contended that to encourage innovative behaviors, organizations should have participative and effective HRM practices. Hashim et al. (2005) also found a significant positive correlation between HR practices and innovation activities in 48 SMEs in Malaysia. They recommended that SMEs should adopt 11 HR practices (rewarded for innovation, creativity and innovation training, skills sharing, see people as people, develop innovation capabilities, recruit competent employees, various recruiting sources, various hiring procedures, continuous training and high job security) to accelerate the innovation processes and hence the organization's success and survival.

There are a number of studies on the role of HRM practices in OI whether in SMEs or large businesses. Some of the HRM practices considered include career development (Sels et al., 2006), recruitment or selection or staffing (Osman et al., 2011b; Rahim, 2009), training and development (Zheng et al., 2009), performance management or appraisal (Hui, 2009), HR planning or function or department (Nguyen & Bryant, 2004), employee participation (Kok & Hartog, 2006), employee relations or communications (Cunningham & Rowley, 2007), compensation or reward system (Kwang et al., 2008), and others. However, since communication and information sharing, compensations, job design, performance appraisal, selection and training and development practices were mostly examined in SMEs, this study focused on them.

Communication and information sharing among employees will foster synergistic working relationships (Nonaka, 1994 cited in Vlachos, 2008) as they will establish a conducive organizational climate that encourages the employees to give full commitment and collaboration to the organization. The employees will become more creative in generating ideas, which result in innovativion (Ar & Baki, 2011; Brockbank, 1999). Through information sharing, competitive advantages for the organization can be developed and organizational success can be enhanced.

Reward system or compensation is also argued to motivate employees to be innovative (Chen & Huang, 2009; Kok & Hartog, 2006). In the organizations where innovation is the driving force, the reward system can motivate the employees to risk taking, develop more products and generate newer ideas (Gupta & Singhal, 1993).

The reward system can involve both intrinsic and extrinsic rewards (Chen & Huang, 2009), such as freedom of creativity, financial rewards, promotions and other recognitions (Gupta & Singhal, 1993).

With regards to **job design**, previous scholars emphasized that organizations should design jobs that allow ambiguity as well as permiting their employees freedom in developing new ideas (Schuler & Jackson, 1987). Reviewing past studies, Jimenez-Jimenez and Sanz-Valle (2008) noted that jobs should promote job enrichment, flexibility, autonomy, employee participation and communication. Gu and Gera (2004) also added that the effect of flexible job design was relatively large in improving the productivity and innovation. Meanwhile, job enrichment could increase employees' discretion and decision-making powers (Stephen Wood & Wall, 2007). Furthermore, literatures also highlight the utilization of teamwork to enhance innovation (Laursen & Foss, 2003). This is consistent with Miles, Snow, and Miles's (2000, p. 305) remark that self-management is the 'first design principal' for an innovative and collaborative organization.

Performance appraisal is implemented to support employees to work effectively (Leede & Looise, 2005), and it is likely to enhance organizational innovation (Shipton, West, Dawson, Birdi, & Patterson, 2006). Effectively appraising employees performance is vital to effective human resource management. It can elevate employees' motivation to embark on innovation activities that benefit the organization (Jiménez-Jiménez & Sanz-Valle, 2005). For example, the diversity of innovations leads to numerous patents, publications, grants and reports, which can

improve performance of the organization (Gupta & Singhal, 1993). In addition, Li et al. (2006) found that appraisal and control based on innovation process can encourage risk-taking actions of employees and thus, improve firm's technological innovation.

Selection or staffing is key for innovation (Jimenez-Jimenez & Sanz-Valle, 2008). Innovation is likely to happen when the employees selected have the necessary talents, skills, and knowledge. Chen and Huang (2009) stated that in order to innovate, an organization will probably face with the uncertainty of success. In this regardd, the organization will need employees who are risk taking, flexible and tolerant of uncertainty. Through effective recruitment, selection or staffing actions, employees will produce new ideas in the organization's innovation process (Chen & Huang, 2009; Jimenez-Jimenez & Sanz-Valle, 2008).

Training and development prepares employees to be multi-talented and multi-skilled which is imperative for innovation activities (Jimenez-Jimenez & Sanz-Valle, 2008), and hence enhanced organizational performance (Shipton, West, Dawson, Birdi, & Patterson, 2006). Training improves the capabilities of accepting new knowledge and skills, which can be used to enhance innovation competencies among the employees (Diaz-Fernandez et al., 2015; Li, Zhao, & Liu, 2006). Shipton et al. (2006) showed that exploratory learning was higher in organizations that emphasized training than in non-training organizations. The following discusses the relationship between HRM practices and OI.

Accordingly, the following hypothesis was postulated:

H2: Communication and information sharing is positively related to organizational innovation.

H3: Compensation is positively related to organizational innovation.

H4: Job design is positively related to organizational innovation.

H5: Performance appraisal is positively related to organizational innovation.

H6: Selection is positively related to organizational innovation.

H7: Training and development is positively related to organizational innovation.

3.3.3 Relationship Between Organizational Innovation and Organizational Performance

Organizational innovation demonstrates a strong influence on organizational performance (Hilman & Kaliappen, 2015; Kitapci, Aydin, & Celik, 2012; Lee & Hsieh, 2010; Lu, Zhu, & Bao, 2015; McDermott & Prajogo, 2012; Rosenbusch, Brinckmann, & Bausch, 2011). The capability of an organization to innovate allows a diversity of strategies and opportunities to be pursued in order to enhance growth and survival. An organization that emphasizes innovation activities have higher impact on their employees' sense of commitment and productivity (Rosenbusch et al., 2011; Zhou, Gao, Yang, & Zhou, 2005). Therefore, ability to innovate can be an effective strategic capability for SMEs to address problems related to small size and new ventures. Literature indicates that SMEs that cultivate innovation can have better performance than those mainly focusing on the creation of innovative products

and services (Rosenbusch et al., 2011). Indeed, some scholars argue that firms will be more successful in responding to their environment if they have greater capacity to innovate (e.g. Avlonitis & Salavou, 2007; Calantone et al., 2002; Hult et al., 2004; Keskin, 2006; Rhee et al., 2010). This enables SMEs to develop new capabilities that can lead to competitive advantage and ultimately, achieve superior performance.

In Malaysia, to further encourage entrepreneurs to enter the field of high technology and innovation-driven industry, SME Corp Malaysia also has implemented the SME Innovation Award, which is the premier award to recognize and acknowledge the most innovative SMEs in Malaysia. They have also extended the Green Lane Policy from end-2015 until end-2017 as an incentive to encourage innovation among SMEs. All these measures are implemented to enhance the competitiveness and hence SMEs performance in Malaysia. Such measures show that innovation can be a source of competitive advantage (Damanpour & Schneider, 2006). Previous studies found that organizations that practice more innovative behavior are likely to initiate organizational changes to boost organizational performance (Che-Ha & Mohd-Said, 2012; Damanpour & Evan, 1984; Jimenez-Jimenez & Sanz-Valle, 2008; Ngah & Ibrahim, 2009). Thus, the following hypothesis was developed:

H8: Organizational innovation is positively related to organizational performance

3.3.4 The Mediating Role of Organizational Innovation

The literature clearly shows that HRM practices and EO have a positive effect on organizational performance. However, what goes on in the "black box" between these two variables and performance relationship remains an under-researched area in SMEs. That is, there is lack of insight into how HRM practices and EO produce value to the organization. By purely investigating the direct relationship between HRM practices and EO with performance, scholars argue that this would reveal a partial overview of performance (Theriou & Chatzoglou, 2008; Wiklund & Shepherd, 2005).

Despite the general consensus in the literature about the existence of a positive relationship between HRM and firm performance, there are still debates about the direction of causality and the nature of the prediction model highlighted by strategic HRM experts (J.B. Barney & Wright, 1998; Wall & Wood, 2005; Wright, Gardner, Moynihan, & Allen, 2005). For instances, Wright et al. (2005) noted the inconsistent results of HRM practices and organizational effectiveness, suggesting that the relationship is probably more complicated than originally thought (Wall & Wood, 2005) because the primary mechanism explaining how HRM practices relate to organizational performance is not yet established, either theoretically or empirically (Mayson & Barrett, 2006; Messersmith, Patel, Lepak, & Gould-Williams, 2011; Takeuchi et al., 2007; Wall & Wood, 2005; Wright et al., 2005). As a result, this research focused on the indirect effect of HRM practices on organizational performance. In this study, organizational innovation was identified as the potential

mediator through which HRM practices can affect performance (Farouk, Elanain, Obeidat, & Al-Nahyan, 2016; Jiang, Takeuchi, & Lepak, 2013; Zhou et al., 2013). Furthermore, the practices of HRM in SMEs tend be informal and limited (De Kok & Uhlaner, 2001). So, in the context of SMEs, other variables need to be incorporated to explain organizational performance.

Literatures also indicate a direct EO-performance relationship and various internal and external factors that affect this relationship. Yet, to date, the main debate remains within the area of EO research, particularly a missing link in the investigation of the EO-performance linkage. Looking at the Malaysian context, the role of innovation has been highlighted as the key factor affecting the performance of SMEs, particularly to drive productivity (NSDC, 2012a). Hence, organizational innovation is critical to maximize the effect of the EO on firm performance. Accordingly, this study seeks to contribute the EO-performance literature by incorporating OI as a missing link in the examination of the relationship.

This study built on the existing body of work by considering OI as a mediator in the relationship between EO and HRM practices and organizational performance. A mediator is introduced to stimulate better outcomes. Fundamentally, a mediator is used to extend the effect of the relation between the predictor and the criterion, and the mediator is best used whenever there is a strong relation between the predictor and the criterion variable (R. M. Baron & Kenny, 1986). Previous studies have shown that OI acts as a strong intermediate indicator of the success of an organization (Al-Hakim & Hassan, 2013; Mafabi et al., 2015). According to Keizer,

Dijkstra, and Halman (2002), innovation is among the primary processes by which SMEs can contribute to the increase in the economic dynamism of each industry.

Medina and Rufin (2009), in their study on retailers, discovered that market driving was a powerful determinant of performance and innovation, which acted as a mediator between the retailer's strategic orientation and business performance. Han, Kim, and Srivastava (1998) also investigated the innovation-mediated effects in market orientation and corporate performance relationship in the banking industry. They found that two organizational innovativeness components (technical versus administrative) might help in identifying empirical familiarities or reconciling unfamiliarity in the market orientation and performance relationship, whereby the utility of the market orientation knowledge can be an advance in the business strategies. Vincent, Bharadwaj and Challagalla (2004) also used innovation as a mediator between environmental and organizational variables and financial performance. They identified that based on the previous studies, innovation was selected as it can accelerate the chosen variables and performance significantly. This indicates that organizational resources are not enough to achieve superior performance. Moreover, innovation is still evolving and can serve organizations in addressing the current dynamism in their environment (Vincent, Bharadwaj, & Challagalla, 2004).

Several researchers have examined a number predictors of OI and one of them is HRM practices, which were found to be crucial in accelerating innovation activities and performance (Child, 1972; Diaz-Fernandez, Bornay-Barrachina, & Lopez-

Cabrales, 2015; Fu, Flood, Bosak, Morris, & O'Regan, 2015; Jimenez-Jimenez & Sanz-Valle, 2005; Kok & Hartog, 2006; Lau & Ngo, 2004; Mavondo, Chimhanzi, & Stewart, 2005; Prieto & Pe´rez-Santana, 2014; Shipton, Fay, West, Patterson, & Birdi, 2005; Zhou et al., 2013). The competitive environment requires that a firm is proactive in its HRM practices for new inventions and ideas to be created (Jimenez-Jimenez & Sanz-Valle, 2008; Shipton et al., 2005). Effective management of human resources can attract, develop, motivate, and retain the employees to achieve superior performance (Jackson & Schuler, 1995). Accordingly, Kok and Hartog (2006) proposed innovativeness as an intermediary in the relationship between HRM practices and performance.

Covin and Slevin (1991)) emphasized that EO drives innovative activities in a firm. Innovation is an intrinsic condition in entrepreneurship and can deliver success to a firm (Avlonitis & Salavou, 2007; Garcia-Morales et al., 2006). Helm et al, (2010) examined the claim by investigating the mediation of innovativeness between motivation and entrepreneurial success. They proposed that entrepreneurial orientation of the entrepreneurs affects new venture performance via the capability of the organization to generate innovation. Researchers also contended that organizations need to integrate EO and HRM practices in order to foster innovative capability to boost their performance (Jimenez-Jimenez & Sanz-Valle, 2008; Nasution et al., 2011). Therefore, the following hypotheses were proposed:

H9: Organizational innovation mediates the relationship between EO and organizational performance.

H10: Organizational innovation mediates the relationship between communication and information sharing and organizational performance.

H11: Organizational innovation mediates the relationship between compensation and organizational performance.

H12: Organizational innovation mediates the relationship between job design and organizational performance.

H13: Organizational innovation mediates the relationship between performance appraisal and organizational performance.

H14: Organizational innovation mediates the relationship between selection and organizational performance.

H15: Organizational innovation mediates the relationship between training and development and organizational performance.

3.3.5 The Moderating Role of Managerial Ties

Even EO and HRM have been found to enhance performance, the findings on the relationship between organizational innovation and organizational performance are inconsistent. While some studies showed positive correlations (Ar & Baki, 2011; Keskin, 2006; H. Li & Atuahene-Gima, 2001; Rhee et al., 2010), others revealed negative correlations (Rosenbusch et al., 2011; Vermeulen, De Jong, & O'Shaughnessy, 2005). Yet others did not find any relationship (Birley & Westhead, 1990; Heunks, 1998; C. Y.-Y. Lin & Chen, 2007). Inconsistent results may be due to different performance measurement and the sampled organizations involved

(Damanpour, 1990). It is argued that the use of objective and subjective performance indicators, like sales or self-reported performance, can influence the findings (Damanpour, 1990). Besides, innovation itself also cause vary with performance. Therefore, a moderator needs to be introduced.

According to Baron and Kenny (1986), in general terms, a moderator can be described as a variable that influences the strength of the relation between a predictor or independent variable and a dependent or any other criterion variable. In other words, the moderator is a third variable that can affect the correlation between the two other variables. Baron and Kenny (1986) further recommended that the moderator variables introduced when the correlation between the predictor and the criterion variables is unexpectedly weak or inconsistent.

This study employed managerial ties as the moderator between organizational innovation and organizational performance. Over the past two decades, developing networking relationship has been emphasized as an important strategy to improve business performance (Van Laere & Heene, 2003). Through such relationships, businesses can develop competitive advantages because such ties provide opportunities for new ideas, new markets, new information exchanges, and new network extensions. Moreover, according to Zeng et al. (2010), Xu, Lin and Lin (2008), Biggs and Shah (2006), and Farinda et al., (2009), business networking are one of the critical success factors in the business environment, particularly in SMEs. According to Xu et al. (2008), business networking or managerial ties are important to accelerate the organizational innovation. The ideas or information exchange

between the network groups may open up opportunities for the organizations to innovate.

Managerial ties have been found to be a moderator in a number of studies (Walter, Auer, & Ritter, 2006). Stam and Elfring (2008) investigated the moderating role of managerial ties between EO and organizational performance for both intra- and extra-industry. As expected, they discovered that network centrality and extensive bridging ties in organizations strengthened the positive relationship between EO and organization performance. Boso, Story, and Cadogan (2013) also showed that in Ghana the entrepreneurial firms can accelerate the performance benefits of their entrepreneurial- and market oriented exertions by fostering strong relationship with managers in other business organizations and governmental agencies. Walter et al. (2006) explored the impact of network capability on inter-organizational relationships by using 149 university spin-off databases. They found that the networks had strengthened the correlation between EO and spin-off performance. The EO itself was not enough to achieve the best impact on organizational performance, and it was a wise decision to include the network capabilities as its moderator (Walter et al., 2006). Walter et al.'s (2006) study supported previous suggestion that networks are important in enhancing performance and for survival (Biggs & Shah, 2006; Farinda et al., 2009; Van Laere & Heene, 2003; Xu et al., 2008; Zeng et al., 2010).

Based on the above discussion, this study proposed the following:

H16: Extensive utilization of managerial ties moderate the relationship between organizational innovation and organizational performance.

3.13 Summary

This chapter described the conceptual background, the relevant research hypotheses and the proposed research model. Hypotheses were developed to test the relationship between entrepreneurial orientation and HRM practices on organizational innovation and subsequently organizational performance. This study also investigated the mediating effects of organizational innovation and the moderating effects of managerial ties on the relationship between organizational performance and its determinants. The next chapter describes the methodology used to carry out the study.

CHAPTER FOUR

RESEARCH METHOD

4.1 Introduction

This chapter explains the research methodology used in this study. The sections that follow clarify the research design, population and sample, research instruments and data collection procedure. The final section discusses the statistical techniques used to test the hypotheses.

4.2 Research Design

The purpose of this study was to investigate whether organizational resources, such as, entrepreneurial orientation and HRM practices affect organizational innovation, which, in turn, influence organizational performance in SMEs. This study also examined the role of organizational innovation as a mediator between entrepreneurial orientation and HRM practices with organizational performance. In addition, this study examined the moderating role of managerial ties on the relationship between organizational innovation and organizational performance. This study was correlational in nature. The hypotheses testing in line with the purposes of the study examined the relationship to which variations in one factor correspond with variations in one or more factors based on correlation coefficient (Cronbach, 1957; Isaac & Michael, 1981). This correlation study was also cross-sectional in that data

for all the study variables were collected at one point of time. This study was undertaken within a non-contrived setting in which intervention to the employees' work was minimum. Data on all variables under study were collected using a self-administered questionnaire.

4.3 Population and Sample

According to the SME Corp. Directory (SME Corp. Malaysia, 2012), 4,591 SME firms that are currently operating in Peninsular Malaysia have registered with SME Corp. Malaysia in the period between 2004/05 and 2012 (as at 23 May 2012). In this study, the population referred to all SMEs in manufacturing sectors operating in the west coast of Peninsular Malaysia that have registered with SME Corp. Malaysia in the period between 2004/05 and 2012. The west coast of the peninsular was chosen due to high concentration of SMEs. Of the 4,591 total SMEs in Peninsular Malaysia, 4,303 SMEs (> 90%) registered are located in the west coast. Therefore, the population size considered for this study was 4,303 firms. The distribution of SMEs in the manufacturing sectors by state is depicted in Table 4.1.

Table 4.1
Distribution of SMEs in the Manufacturing Sector by State

State	Total SMEs	Percentage of SMEs (%)
West Coast:		
Selangor	1,893	41
Penang	595	13
Johor	492	11
FT Kuala Lumpur	439	10
Perak	281	6
Melaka	235	5
Kedah	235	5
Negeri Sembilan	122	3
Perlis	11	0
Subtotal	**4,303**	**93**
East Coast:		
Terengganu	132	3
Pahang	83	2
Kelantan	73	2
Subtotal	**288**	**7**
Total	**4,591**	**100**

Source: SME Corp. directory (SME Corp. Malaysia, 2012)

The list of companies used for the sampling frame was provided by SME Corp. Malaysia (SME Corp. Malaysia, 2012). The list is available from their website at http://www.smecorp.gov.my. This study defined SMEs as those firms that employ full-time employees between five and not exceeding 150, consistent with the definition of NSDC (NSDC, 2014). Indicators of annual sales volume were not applied due to the difficulty in obtaining information relating to objective financial data. Previous studies noted that many SMEs refused to provide such data (Abdul Rahim Othman, 2007; Shuhymee Ahmad, 2010).

The unit analysis in this study was the firm. The owners/managers of SMEs were the key respondent to represent the top management of the firm. They were considered because they were able to provide answers to questions on the variables related to the study. They also had knowledge of the overall operational activities of the business organizations represented. Previous studies found that the owner or top management of SMEs was primarily responsible for making key decisions of the firm as well as developing strategic orientations of the organization (Covin & Slevin, 1989; Knight, 1997; Kreiser, Marino, & Weaver, 2002; Lumpkin & Dess, 1996; Miller, 1983; Miller & Friesen, 1982; Zahra & Covin, 1995).

In any research study, it is crucial to select an appropriate sample size. According to Krejcie and Morgan (1970), the determination of an efficient sample size is needed to confirm that the sample selected represents a given population. In order to acquire an appropriate sample size for this study, a table used by Krejcie and Morgan (1970) was applied. As the population size was 4,303 firms, the appropriate sample size was 354 firms. Furthermore, the sample size of this study complied with the rule of thumb by Roscoe (1975, as cited in Sekaran, 2003), who stated that the appropriate sample size for most research should be larger than 30 and smaller than 500. Thus, the sample size of 354 for SME firms was deemed sufficient. Secondly, in a multivariate research, i.e., multivariate analysis, the sample size should be several times (preferably 10 or more times) as large as the number of variables. In this study, there were 10 variables, and the required sample size should be 100 or more. In addition using the '10 times' rule of thumb, G*Power program version 3 was also employed to ensure the sample size was sufficient. A priori power analysis of

G*Power was used to estimate the appropriate sample sizes based on some statistical parameters (Faul, Erdfelder, Lang, & Buchner, 2007). Using seven predictors, medium effect size convention of 0.15, and significance level of 5%, this study obtained a sample size of 153 at the statistical power of 0.95 (refer Appendix E).

Anticipating a low response rate, the researcher distributed more questionnaires to the respondents, which is a common practice in the social sciences discipline. As suggested by Salkind (1997), the over sampling method that increases the sample size by 40 to 50% is to address the problem of unusable responses and low response rate. Previous studies on SMEs in Malaysia demonstrated a low response rate, in which the average was approximately 20% (Ahmed, Masjuki, & Taha, 2004; Daud & Mohamad, 2010; Osman et al., 2011a; Sohail & Hoong, 2003). To address the issues of usable cases and low response rate, the number of questionnaires for distribution was increased by 50% of the sample size. Thus, after factoring the 50% increase, the researcher distributed 531 questionnaires. The procedure involved in selecting the sample is discussed in the following section.

4.4 Sampling Procedure

The sampling method used was simple random sampling, which is a straightforward method that assigns each element of the sample an equal chance of being chosen as the subject. According to Hair, Black, Babin, and Anderson (2010), the simple random technique can keep the researcher from becoming biased in the selection of respondents because each element of the population has an equal probability of being

selected. This technique provides a sample that is highly representative of the population being studied and enables the researcher to generalize the results obtained for the total population.

The selection of random samples was done in three steps using Microsoft Office Excel 2007. First, all 4,303 firms were numbered, and were put together at one time. Second, of 4,303 SMEs, 531 firms were selected using the command "returns a random number between the numbers specify (RANDBETWEEN)" of Microsoft Office Excel 2007 (e.g., RANDBETWEEN (1,4303)). Therefore, a number was picked by Microsoft Office Excel randomly, for example, 990. Finally, the formula or command was copied to select all 531 firms. Table 4.2 shows the distribution of the randomly selected SMEs. Table 4.2 also illustrates that the number of SMEs selected was consistent with the areas that have high concentration of SMEs.

Table 4.2
Distribution of randomly selected manufacturing SMEs

State	Total SME	Sample Identified
Kedah	235	53
Penang	595	78
Selangor	1,893	126
FT Kuala Lumpur	439	69
Johor	492	74
Perak	281	58
Melaka	235	51
Negeri Sembilan	122	22
Perlis	11	-
Total	**4303**	**531**

Source: SME Corp. directory (SME Corp. Malaysia, 2012)

4.5 Data Collection Procedure

Once the respondents were identified, the next procedure was the distribution of the questionnaires. Questionnaire are considered as an efficient data collection method. It is commonly used in quantitative studies to acquire large data in order to generalize to the population as a whole (Hair, Money, Samouel, & Page, 2007). The questionnaires were personally distributed to the respondents in the first week of September 2013. Initially, the researcher contacted the manufacturing company to ensure that they were willing to be a respondent. A brief description was provided to respondents regarding the purpose of the study and they were assured that all the feedbacks and information will be kept confidential. Subsequently, a questionnaire was delivered to them. The respondents were asked to complete the questionnaire within two weeks. During this period, follow-up telephone calls were made to remind respondents to complete the questionnaire. After two weeks, the researcher collected the completed questionnaires. For those who did not return the questionnaire at the end of two-week period, the questionnaires were considered as unreturned.

The data collection process was conducted systematically state by state begining with Selangor and Federal Territory of Kuala Lumpur (center region) followed by Johor, Melaka, Negeri Sembilan, (southern region) and ending with Perak, Penang, Kedah and Perlis (northern region). This data took two months to be collected for each region. Hence, the whole data collection process took six months to complete from September, 2013 to March, 2014.

4.6 Research Instruments

The questionnaire of this study consists of a cover letter and questions which are divided into section A and F. The cover letter briefly states the purpose of study, confidentiality of the gathered data and instructions on how to answer the questionnaires. The dependent variable was organizational performance and the independent variables were entrepreneurial orientation and HRM practices. Organizational innovation was the mediating variable, while managerial ties was the moderator. The questionnaire developed in this study had 87 items organized into six sections (please see appendix 1). Section A comprised 27 items, which measured HRM practices of communication and information sharing, compensation, job design, performance appraisal, selection and training and development. Section B comprised nine items, which measured entrepreneurial orientation. Section C had 15 items of organizational innovation. Section D comprised six items of managerial ties, and Section E had 19 items, which measured performance of the organization. The final section contained 11 items that asked about the background of the respondents and the organization.

Likert-type scale of different points was used to measure the items. Since most owners/managers of SMEs had moderate educational background, these different point scales could facilitate them when answering the questions. Furthermore, the selection of the number of scale points used for Likert-type items had no effect on either reliability and validity, as they are independent of the number of points used (Matell & Jacoby, 1971). The measures were mostly adapted from numerous sources

with acceptable reliabilities (Cronbach's alpha coefficient). Table 4.3 exhibits a summary of the measures used in this study (refer to Appendix A for details on questionnaire).

Table 4.3
Measures of the study

Construct	Sources	No. of items	Reported reliability
HRM practices:	Takeuchi, et al.		0.90
Communication and information sharing	(2007);	6	
compensation	Agarwala	4	
Job design	(2003)	3	
Performance appraisal		4	
Selection		6	
Training and development		4	
Entrepreneurial orientations:	Covin and		0.87
Innovativeness	Slevin (1989)	3	
Proactiveness		3	
Risk taking		3	
Organizational innovation	Che Ha and		
Managerial innovation	Mohd Said	5	0.87
Product innovation	(2012)	4	0.68
Proses innovation		6	0.87
Managerial ties:	Luk et al.		
Ties with managers at other firms	(2008),	3	0.81
Ties with government officials	Peng and Luo	3	0.92
	(2000)		
Perceived organizational performance	Ahmad et al.		
Satisfaction with financial performance	(2011)	5	0.92
satisfaction with non-financial performance		6	0.89
Performance relative to competitors		5	0.93
business growth		3	0.88
Background of respondent and firm	Gender, age, race, education level, job position, job tenure, firm location, organization tenure, number of employees, type of ownership and type of industry.		

4.6.1 Organizational Performance

The dependent variable, organizational performance, was a self-reported measure. A number of previous studies have used this technique to obtain data on organizational performance (Lopez, Peon, & Ordas, 2005; Lumpkin & Dess, 1996; Wiklund & Shepherd, 2003; Youndt, Snell, Dean, & Lepak, 1996). Past studies have also revealed that the subjective nature of this technique was reliable (Acquaah, 2007; Calantone, Cavusgil, & Zhao, 2002; Delaney & Huselid, 1996; Garcia-Morales, Llorens-Montes, & Verdu´-Jover, 2007; Yang, Watkins, & Marsick, 2004; Youndt et al., 1996).

The subjective measure of organizational performance was suitable because the majority of SMEs are private companies and they have no legal obligation to disclose such information to the public (Shuhymee Ahmad, 2010). Abdul Rahim Othman (2007) concurred that it is hard to get an objective of financial-related information from SMEs in Malaysia. Moreover, self-reported measures may, in certain cases, represent a more precise explanation than objective measurements, especially in the context of SMEs (Abdul Rahim Othman, 2007; Davis, Bell, Payne, & Kreiser, 2010; Morgan & Strong, 2003; Shuhymee Ahmad, 2010; Subramaniam, Shamsudin, & Ibrahim, 2011; Vlachos, 2008, 2009). Accordingly, several studies found a strong correlation between objective and subjective measurements (Davis et al., 2010; Morgan & Strong, 2003).

In this study, following previous scholars, organizational performance was conceptualized as a second-order formative construct with four first-order reflective constructs (Ahmad, Ramayah, Wilson, & Kummerowidth, 2010; Ahmad et al., 2011; Gholami, Sulaiman, Ramayah, & Molla, 2013; Rai, Patnayakuni, & Seth, 2006). A scale adapted by Ahmad et al. (2011) with four dimensions of perceived organizational performance was used. The four dimensions were: (a) Satisfaction with financial performance; (b) Satisfaction with non-financial performance; (c) Performance relative to competitors; (d) Business growth. Satisfaction with financial performance consisted of five items. They were profitability, sales turnover, sales growth, return on investment, and market share. Meanwhile, satisfaction with non-financial performance had six items that asked about customer satisfaction, customer retention, relationship with suppliers, business image, workplace industrial relations, and work-life balance. Respondents assessed their satisfaction with financial and non-financial performance of their business on a five-point Likert-type scale, ranging from 1 = “not at all satisfied” to 5= “very satisfied."

In addition, respondents were asked to compare the performance of their business with that of their major competitors over the past 12 months, in terms of return on sales, cash flow, net profit, market share and return on investment. A five-point Likert-type scale was used, ranging from 1 = “significantly lower” to 5 = “significantly higher." Finally, three items that asked the respondents about their firm’s business growth over the past 12 months, in terms of changes in sales, market share and cash flow also were included. A five-point Likert-type scale was used for these items that ranged from 1 = “decreasing” to 5 = “increasing significantly." As

reported in Ahmad et al. (2011), all dimensions of organizational performance construct possessed a strong internal consistency of more than 0.8 and the composite reliability values were above 0.7 (see Table 4.4). These values verified the reliability of the dimensionality of the construct. A complete measurement of organizational performance is shown in Table 4.5.

Table 4.4
Reliability Assessment for Organizational Performance Contruct

Business success	Cronbach's alpha	Composite reliability
1. Satisfaction with financial performance	0.92	0.95
2. Satisfaction with non- financial performance	0.89	0.93
3. Performance relative to competitors	0.93	0.96
4. Business growth	0.88	0.75

Source: Ahmad et al. (2011)

Table 4.5
Dimensions and Items Constituting the Organizational Performance Scale

Satisfaction with financial performance
1. Profitability
2. Sales turnover
3. Sales growth
4. Return on investment
5. Market share
Satisfaction with nonfinancial performance
1. Customer satisfaction
2. Customer retention
3. Relationship with suppliers
4. Business image
5. Workplace industrial relation
6. Work and life balance
Performance relative to major competitors
1. Return on sales
2. Cash flow
3. Net profit
4. Market share
5. Return on investment
Business growth
1. Change in sales
2. Change in market share
3. Change in cash flow

Source: Ahmad et al. (2011)

4.6.2 Entrepreneurial Orientation

Entrepreneurial orientation was measured by a multi-item scale that was developed by Covin and Slevin (1989). The scale was derived from the study of Miller and Friesen (1982) and Khandwalla (1977). The EO measurement reflects the individual's perception of entrepreneurial behavior of the owners/managers of SMEs in making strategic decisions and managing the management philosophy. Specifically, previous researchers (Hakala & Kohtamaki, 2011; Y. Li, Huang, & Tsai, 2009; Moreno & Casillas, 2008; Stam & Elfring, 2006, 2008) conceptualized EO as a second-order construct that has three first-order constructs, namely, innovativeness, proactiveness, and risk taking. The scale comprised nine items adapted from Covin and Slevin (1989) and was widely accepted and utilized (e.g., Atuahene-Gima & Ko, 2001; Brown, Davidsson, & Wiklund, 2001; Covin, Green, & Slevin, 2006). A seven-point Likert scale, ranging from 1 = "strongly disagree" to 7 = "strongly agree" was used to measure the items.

The format of the scale was modified from the original numerical scale to a Likert scale, following the recommendation of Shuhymee Ahmad (2010). Based on the feedback received, Shuhymee noticed that the use of a numerical scale had confused the respondents when they answered the questions. The numerical scale is as follow:

1.	In general, the top managers of my firm favor …		
	A strong emphasis on the marketing of tried and true products or services.	1 2 3 4 5 6 7	A strong emphasis on R&D, technological leadership, and innovations.

was modified to this format:

1. In general, the top managers of my firm favor …	
A strong emphasis on R&D, technological leadership, and innovations.	1 2 3 4 5 6 7

Shuhymee Ahmad (2010) reported a Cronbach's alpha of 0.87. Other studies also reported an accepted level of reliability (Chadwick et al., 2008; Kreiser et al., 2002; Stam & Elfring, 2008; Wiklund & Shepherd, 2003), ranging from 0.75 to 0.84.

Three dimensions of EO were measured. They were innovativeness, proactiveness, and risk taking. *Innovativeness* referred to the tendency of the owners/managers to favor change and innovation in order to obtain a competitive advantage for their firm. This includes the tendency of owners/managers to emphasize R&D, technological and innovations, as well as the presence of and changes in the new product line. *Proactiveness* measured the willingness of the owners/managers to take any action prior to competitors in terms of the development of procedures and new technologies, introduction to new products/services in the market, and the capability to respond in a more competitive manner when dealing with their competitors. Meanwhile, risk taking referred to the willingness of the management to perform risky activities, including engaging in high-risk projects, prioritizing bold actions compared to simply being careful in achieving the objective, be daring in allocate resources in solving problems, and to be efficient in seizing opportunities to earn good returns. The nine-item measurement of innovativeness, proactiveness, and risk taking is shown in Table 4.6.

Table 4.6
Items Constituting the Entreprenerial Orientation Scale

Innovativeness
In general, the top managers of my firm favor…
1. …a strong emphasis on R&D, technological leadership, and innovations.
How many new lines of products or services had your firm marketed in the past 3 years'?
2. …very many new lines of products/services
3. …changes in product or service lines have usually been quite dramatic.
Proactiveness
In dealing with its competitors, my firm….
1. …typically initiates actions which competitors, then respond to
2. …is very often the first business to introduce new products/services, operating technologies, administrative techniques
3. …typically adopts a very competitive, "undo-the-competitors" posture
Risk-taking
In general, the top managers of my firm have…
1. …a strong proclivity for high risk projects (with chances of very high return)
In general, the top managers of my firm believe that…
2. …owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objective
When confronted with decision-making situations involving uncertainty, my firm…
3. …typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities

Source: Adapted from Covin and Slevin (1989)

4.6.3 HRM Practices

In the Malaysian context, SMEs do implement HRM practices even though they tend to be basic in nature, as discussed in chapter two. For example, Daud and Mohamad (2010) discovered a substantial difference among 108 SMEs in respect of the adoption of HR practices, where majority of these organizations used an informal approach to managing their HR practices. Meanwhile, Osman et al. (2011a) also disclosed that more than half of 43 (51%) SMEs surveyed in the service sectors had a

HR department in their organization, while the remaining did not have any. In a recent study, Subramaniam et al. (2011) found that 84 SMEs (22 of them were small-sized) in the central region of Peninsular Malaysia demonstrated positive relationships between compensation, information sharing, and training and development, and organizational performance. Moreover, Kwang et al. (2008) found that HRM practices directly and indirectly affected the organizational learning capability of the SME.

The researcher also conducted an informal interview with a few owners/managers of SME firms. Findings from the interview indicate that the organizations implemented HRM practices, but informally and at a very minimum level. As a result, the researcher selected only six HRM practices relevant to the Malaysian SMEs. They were communication and information sharing, compensation, job design, performance appraisal, selection, and training and development. The Cronbach's alpha reliability coefficient for the practices was reported at 0.90 (Takeuchi et al., 2007). The six HRM practices were measured using a five-point Likert scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree". Each dimension is explained further in the following.

4.6.3.1 Communication and Information Sharing

Communication and information sharing was measured using six items adapted from Agarwala (2003). The questions were developed to ask respondents about the organization's practices in sharing information with employees, encouraging open

and transparent communication among employees, organizing family gathering, supporting work environment, respecting employees' contribution, as well as ensuring fairness in management practices. The items of the original questions were restructured so that they could easily understood by the respondents. The last item in the original measure (i.e. item #7) was dropped to avoid confusion with items in risk taking. The seven original items from Agarwala (2003) are shown in Table 4.7. These items were later modified into six items. The new items measuring communication and information are shown in Table 4.8.

Table 4.7
Original Items of the Communication and Information Sharing Scale

1. Information sharing
2. Open and transparent communication
3. Family get-togethers
4. Humanizing work environment
5. Respecting employees
6. Ensuring fairness in management practices
7. Encouraging risk-taking, etc.

Source: Agarwala (2003)

Table 4.8
Items Constituting the Communication and Information Sharing Scale

1. Organizational information is shared with employees.
2. Open and transparent communication is encouraged among employees.
3. Family day is organized from time to time.
4. Supportive work environment is provided.
5. Employees' contribution is appreciated.
6. Fairness is prioritized in management practices.

Source: Adapted from Agarwala (2003)

4.6.3.2 Compensation

Compensation was assessed using a four-item measurement adapted from Takeuchi et al. (2007). The questions were developed to ask the respondents about compensation packages practiced by the organization including extensive benefit, high wages, performance-linked reward system, and skill-based pay. Table 4.9 exhibits the four items of the compensation scale.

Table 4.9
Items Constituting the Compensation System Scale

1. Compensation packages include an extensive benefits package.
2. Compensations include higher wages.
3. The incentive system is tied to skill-based pay.
4. Compensation is contingent on performance.

Source: Adopted from Takeuchi et al. (2007)

4.6.3.3 Job Design

Job design was evaluated using three items adapted from Takeuchi et al. (2007). The questions were developed to ask the respondents about how the organization designs their job, including job rotation, empowering employee to make decisions and designing jobs according to employees' capabilities. Table 4.10 exhibits the three items.

Table 4.10
Items Constituting the Job Design Scale

1. Employees are involved in job rotation.
2. Employees are empowered to make decisions.
3. Jobs are designed around their individual skills and capabilities of employees.

Source: Adopted from Takeuchi et al. (2007)

4.6.3.4 Performance Appraisal

Performance appraisal was appraised using four items adapted from Takeuchi et al. (2007). The questions were developed to ask the respondents to indicate their degree of agreement or disagreement on the questions listed in Table 4.11.

Table 4.11
Items Constituting the Performance Appraisal Scale

1. Performance is based on objective, quantifiable results.
2. Performance appraisals include management by objective, with the mutual goal setting.
3. Performance appraisals include developmental feedback.
4. Incentives are based on team performance.

Source: Adopted from Takeuchi et al. (2007)

4.6.3.5 Selection

Selection was measured using six items adapted from Takeuchi et al. (2007). The questions were developed to ask the respondents to indicate their degree of agreement or disagreement on the questions listed in Table 4.12.

Table 4.12
Items Constituting the Selection Scale

1. Selection is comprehensive (uses interviews, tests, etc.)
2. Selection emphasizes their ability to collaborate and work in teams.
3. Selection involves screening many job candidates.
4. Selection focuses on selecting the best all-around candidate, regardless of the specific job.
5. Selection emphasizes promotion from within.
6. Selection places priority on their potential to learn.

Source: Adopted from Takeuchi et al. (2007)

4.6.3.6 Training and Development

Owners/managers' perception of their organization training and development program was assessed using four items adapted from Takeuchi et al. (2007). The questions were developed to ask the respondents to indicate their degree of agreement or disagreement on the questions listed in Table 4.13.

Table 4.13
Items Constituting the Training and Development Scale

1. Training is continuous
2. Training programs are comprehensive.
3. Training programs strive to develop firm-specific skills and knowledge
4. The training programs emphasize on-the-job experiences

Source: Adopted from Takeuchi et al. (2007)

4.6.4 Organizational Innovation

In this study, organizational innovation was determined as a unique construct. Jimenez-Jimenez and Sanz-Valle (2008) found that a second-order factor analysis indicated that the three dimensions could be modeled by higher-order construct. Hence, organizational innovation was captured by three types of innovation: product innovation, process innovation, and managerial innovation. This scale was adapted from Che-Ha and Mohd-Said (2008; 2012). Respondents were asked to indicate their degree of agreement or disagreement on a six point Likert scale, ranging from 1 = "strongly disagree" to 6 = "strongly agree".

Product innovation was measured by four items, as shown in Table 4.14. The original three items were restructured to form four items to avoid the problem of double-barreled questions, which would confuse the respondents and result in ambiguous responses. Thus, the first original item was modified by splitting it into two separate questions. Instead of using "Introduce new ranges / modified products", the item became "Introduce new ranges of products", and "Introduce modified products".

Process innovation, on the other hand, was measured by six items. The items assessed the perception of the owners/managers toward the new inputs and systems involved in the organization processes that facilitate the production of products and service. Finally, managerial innovation was measured by five items that assessed the perception of the owners/managers on new policy changes relating to recruitment of employees, resource allocation, tasks, procedures and authority structure, rewards distribution and information systems implementation to facilitate communications and decision-making in the organization. The items also asked about the adoption of modern techniques of management, such as, Total Quality Management, Total Quality Control and Just in Time Delivery. The Cronbach's-alpha reliability coefficients were reported at 0.68 (product innovation), 0.87 (process innovation) and 0.87 (managerial innovation). Table 4.14 shows 15 items used to measure organizational innovation.

Table 4.14
Items Constituting the Organizational Innovation Scale

Product Innovation
1. Introduce new ranges of products 2. Introduce modified products 3. Upgrade the quality of our products 4. Manage to sell our product/services to a new segment of the domestic market
Process Innovation
1. Manage to sell our product to a new segment of export markets 2. Use new strategies (eg. ICT) to promote or advertise our products 3. Use new ways to finance our business (eg. export credit financing/refinancing, joint ventures, venture capital, etc) 4. Change the organizational structure (eg. creating new departments, adding top posts/managers, creating a special team/group etc) 5. Use latest equipment/ devices to process our products or deliver our services 6. Use latest software/ hardware in our administration or management (eg. accounting, personnel, sourcing, purchasing, supplying)
Managerial Innovation
1. Change the employee attitudes (eg. through training, awareness campaigns on company's vision/goals, quality management, teamwork etc) 2. Change the work practices (e.g employing foreign labour, more capital intensity, more skilled labor, etc., more decentralization/delegation of tasks) 3. Change the human relation practices (eg. through collective agreement, open-door concept, universation of workers, employee suggestion programme) 4. Reward individuals for innovative ideas 5. Apply good quality practices (eg. ISO, Good Manufacturing Practice (GMP), Total Quality Management, Quality Circles, Job Rotation / Multi – Skilling, Performance Related Pay)

Source: Adapted from Che-Ha and Mohd-Said (2008, 2012)

4.6.5 Managerial Ties

A scale developed by Peng and Luo (2000), and then adapted by Luk et al. (2008) in their study of manufacturing companies in Hong Kong and Mainland China, was used to measure managerial ties between the owners/managers of the firm with managers in other firms and ties with government officials. The researcher used the

scale adapted by Luk et al. (2008) because their modifications to the original scale were relevant to the context of Malaysian SMEs. Following Li, Poppo, and Zhou (2008), MT was conceptualized as a second-order formative construct with two first-order reflective construct, namely, ties with other managers and ties with government officials. The scale for managerial ties consisted of six items, which included three items for ties with managers in other firms, and three items for ties with government officials.

Specifically, ties with managers in other firms describe the extent to which the owners/managers of the firm have utilized social ties, networks, and connections during the past three years with managers in other firms, such as, buyers, suppliers and competitor firms. Ties with government officials, on the other hand, describe the extent to which the owners/managers of the firm have utilized social ties, networks, and connections during the past three years with relevant government officials (e.g., FAMA, MARA, MIDA, etc.), with SME support institutions (e.g., SME Corp, MITI, MATRADE, etc.) and financial institutions (e.g., SME Bank, Bank Pembangunan, Agro Bank, etc.). With regards to ties with government official items, some modifications were made to suit the context of Malaysian SMEs. The original three items that were modified are as follows:

Ties with government officials:
Item 4: political leaders in various level of the government.
Item 5: officials in industrial bureaus.
Item 6: officials in regulatory and supporting organizations such as tax bureaus, state banks, commercial administration bureaus, and the like.

Table 4.15 shows the final items used. Respondents reported on a seven-point Likert-type scale, ranging from 1 = "very little" to 7 = "very extensive." Li et al, (2008) reported the composite reliabilities for the first-order indicator of ties with managers in other firms were 0.71 and 0.88 for ties with government officials. The six items to measure managerial ties are shown in Table 4.15.

Table 4.15
Items Constituting the Managerial Ties Scale

Ties with managers at other firms:

1. My firm has utilized social ties with buyers/customers
2. My firm has utilized social ties with suppliers
3. My firm has utilized social ties with distributors

Ties with government officials:

4. My firm has utilized social ties with relevant government officials (e.g. FAMA, MARA, MIDA, or others).
5. My firm has utilized social ties with SME support institutions (e.g. SME Corp, MITI, MATRADE, or others)
6. My firm has utilized social ties with financial institutions (e.g. SME Bank, Bank Pembangunan, Agro Bank or other financial institutions).

Source: Adapted from Luk et al. (2008) and Peng and Luo (2000)

4.7 Demographic and Organizational Information

Respondents were also asked about their personal background and also the organizational background. For the first account, the respondents were to indicate their gender, age, race, education level, job position, and job tenure. For organizational information, they were asked to indicate the firm location, organization tenure, the number of employees, type of ownership, and type of industry.

4.8 Translation of Questionnaire

Questions used in this study were originally developed in the English language. They were then systematically translated into the Malay language. This study used the procedure of back-translation by Brislin (1970) for survey translation across different languages. The original questionnaire (English version) was first translated into the Malay language by a senior English lecturer from Universiti Utara Malaysia (UUM), who is also proficient in the Malay language. Next, the translated questions were submitted to another senior Bahasa Melayu lecturer from the same university, who is also proficient in the English language. The senior lecturer was requested to translate the Malay version of the questionnaire back into the English version (back-translated). The English and Malay versions of the questionnaire were later compared to ensure consistency. Any concerns or inconsistencies between the two versions were referred to the translators until a consensus was collectively reached on the final version.

4.9 Pre-testing the Questionnaire

According to Hair et al. (2007), pre-testing is needed to ensure the accuracy and consistency of the responses. A pre-test is generally conducted to determine whether the items in the questionnaire are clear and acceptable and to test and improve procedures relating to the administration of the instrument. It is also used as a fine tuning measure to avoid any critical errors that might occur in the actual study.

Generally, the researcher uses a small sample of respondents that have similar characteristics to the target population to conduct a pre-test. Hair et al. (2007) proposed the appropriate sample size for a pre-test is between 4 and 30 because a bigger sample more than 30 will not yield any additional information beneficial for revision purposes. Hence, in this study, pre-test was approached to establish face validity of the items. Toward this objective, the questionnaire was given to five experts in the entrepreneurship field in UUM and five owners/managers of SMEs from non-participating companies in the industrial area of Jitra.

In the pre-test, the researcher assessed the readability of the items, accuracy of words, clarity of questions and the suitability of the items used with the respondents. By doing so, the clarity of the questions was established. All comments and feedback given by the respondents were later incorporated to finalize the questionnaire.

4.10 Methods of Statistical Data Analysis

Data in this study were analyzed using Statistical Package for Social Science (SPSS) version 22 and second generation tools, referred to as Partial Least Squares Structural Equation Modeling (PLS-SEM). The former method was used to analyze data to explain the characteristics of the sample (Hair et al., 2007), while the latter was used to examine the hypothesized relationships in the research model proposed in the study (Hair, Hult, Ringle, & Sarstedt, 2014; Wong, 2013).

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Structural Equation Modelling (SEM) is a second-generation multivariate data analysis method used to overcome the limitation of the first-generation technique. It is one of the most powerful statistical models in social science discipline capable of testing the relationships between multiple variables simultaneously (Hair, Hult et al., 2014). It tests the "structure" of interrelationships conveyed in a series of equations comparable to a series of multiple regression equations. SEM is often applied in research as it enables to examine theoretically supported linear and additive causal models (Chin, 1998; Haenlein & Kaplan, 2004). SEM is a mixture of factor analysis and multiple regressions. According to Hair, Hult et al. (2014), there are two different variations of SEM analysis. They are Covariance based (CB-SEM) and Variance based (VB-SEM) (also called PLS-SEM). The objective of CB-SEM is to reproduce the theoretical covariance matrix, without focusing on explained variance. It is mainly used to confirm (or reject) theories by determining how well a proposed theoretical model can estimate the covariance matrix for a sample data set. On the other hand, PLS-SEM aims to maximize the explained variance of the endogenous latent constructs (dependent variables). It is mainly used to develop theories in exploratory research by focusing on explaining the variance in the dependent variables.

Previous studies have widely focused on CB-SEM, even though both approaches (PLS-SEM and CB-SEM) share the same roots (Hair, Sarstedt, Ringle, & Mena, 2012). Nevertheless, the application of PLS–SEM has grown and will be increasingly adopted as a vital statistical tool because of its distinctive methodological features that make it a valuable and potential alternative to CB-SEM approaches (Hair,

Ringle, & Sarstedt, 2011, 2012, 2013; Hair, Sarstedt, Pieper, & Ringle, 2012; Henseler et al., 2014). According to Hair et al. (2011), PLS-SEM is conceptually and practically similar to analysis of multiple regression as the main objective is to maximize the explained variance in the dependent constructs as well as to assess the quality of data based on the characteristics of the measurement model. Hence, PLS-SEM was used to analyze the data in this study.

PLS-SEM was also selected for the following rules of thumb proposed by Hair et al. (2011). PLS-SEM was chosen because the goal of the present study was more about prediction and theory development rather than theory testing and confirmation. In terms of measurement model specification, this study employed formative constructs as part of the structural model. Even though both PLS-SEM and CB-SEM can estimate the model using formative indicators, PLS-SEM has solid support as the recommended method (Hair, Hult et al., 2014). Moreover, since the structural model of this study was complex with many constructs and indicators, this study wished to evaluate the model by using latent variable scores in subsequent analysis. PLS-SEM can also be a good methodological alternative for theory testing when the assumptions of CB-SEM are not met in relation to the normality of distribution, minimum sample sizes, and maximum model complexity, or any related methodological issues occur.

According to Hair, Hult et al. (2014) and Reinartz, Haenlein, and Henseler (2009), PLS-SEM's statistical properties offer highly robust model estimations with normal data and extremely non-normal distributional properties. It has less stringent

assumptions of the variables distribution and error terms (Henseler, Ringle, & Sinkovics, 2009). The measurement error is handled automatically where it is present in the latent variable scores and is ultimately reflected in the path coefficients that are estimated using these scores. While the error produces a bias on the model estimates, also called as the PLS-SEM bias, simulation studies showed that the bias is often at very low levels and thus not substantively significant (Reinartz et al., 2009). PLS-SEM also exhibits a higher degree of statistical power in theory testing compared to CB-SEM (Hair, Hult et al., 2014; Reinartz et al., 2009). PLS-SEM path modeling can be a "silver bullet", if properly used, to estimate causal models in many theoretical models and empirical data situation (Hair et al., 2011). Also, PLS-SEM results highly approximate CB-SEM results. The next section discusses PLS-SEM technique in detail.

4.10.1 Partial Least Squares Structural Equation Modeling (PLS-SEM)

According to Hair, Hult et al. (2014), a PLS path model comprises two elements: a measurement model (also referred to as the outer model in PLS-SEM) and a structural model (also referred to as the inner model in PLS-SEM) (see Figure 4.1). The measurement model of the constructs is used to describe the relationship between the construct and its indicators (rectangles). Basically, there are two different measurement models. They are reflective and formative indicators, as illustrated in Figure 4.1. According to Hair, Sarstedt et al. (2014), the reflective indicators display the directional arrows from the construct to the indicators, demonstrating the assumption that the construct causes the indicators (more

accurately, the covariation) of the indicator variables. That means reflective items are exchangeable, highly interrelated and can be eliminated without altering the construct meaning. As a result, changes in the latent constructs are reflected by changes in the indicator variables. Reflective indicators are connected to a construct through loadings, which are the bivariate correlations between the indicator and the construct.

On the other hand, the formative model shows the directional arrows pointing from the indicators to the construct, forming a causal (predictive) relationship in which the indicators cause the construct. By deleting an item means deleting a part of the construct. That indicates changes in the indicators may alter the nature of the underlying construct. Therefore, it is vital to identify how the term reflective and formative, and the implications related to the classification of 'causal' and 'effect', highlight the different characteristics among both modes of measurement model of the constructs (Jarvis et al., 2003). By that, according to Diamantopoulos and Winklhofer (2001), the option of the preferred mode is confirmed by theoretical considerations concerning the causal priority between the indicators and the latent construct.

The structural model represents the relationships (path) between constructs (circle or ovals). PLS-SEM only permits recursive relationships in the structural model (e.g., no causal loops). Thus, the structural paths between the latent constructs can only head in a single direction. There are two constructs of exogenous and endogenous in the structural model. The term 'exogenous' refers to independent variable which is

used to describe latent variables that only have arrows that point out of them and never have any structural path relationship pointing at them. Meanwhile, the 'endogenous' term refers to dependent variable that represents latent target constructs in the structural model that are described by other constructs through structural model relationship (Hair, Hult et al., 2014; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014).

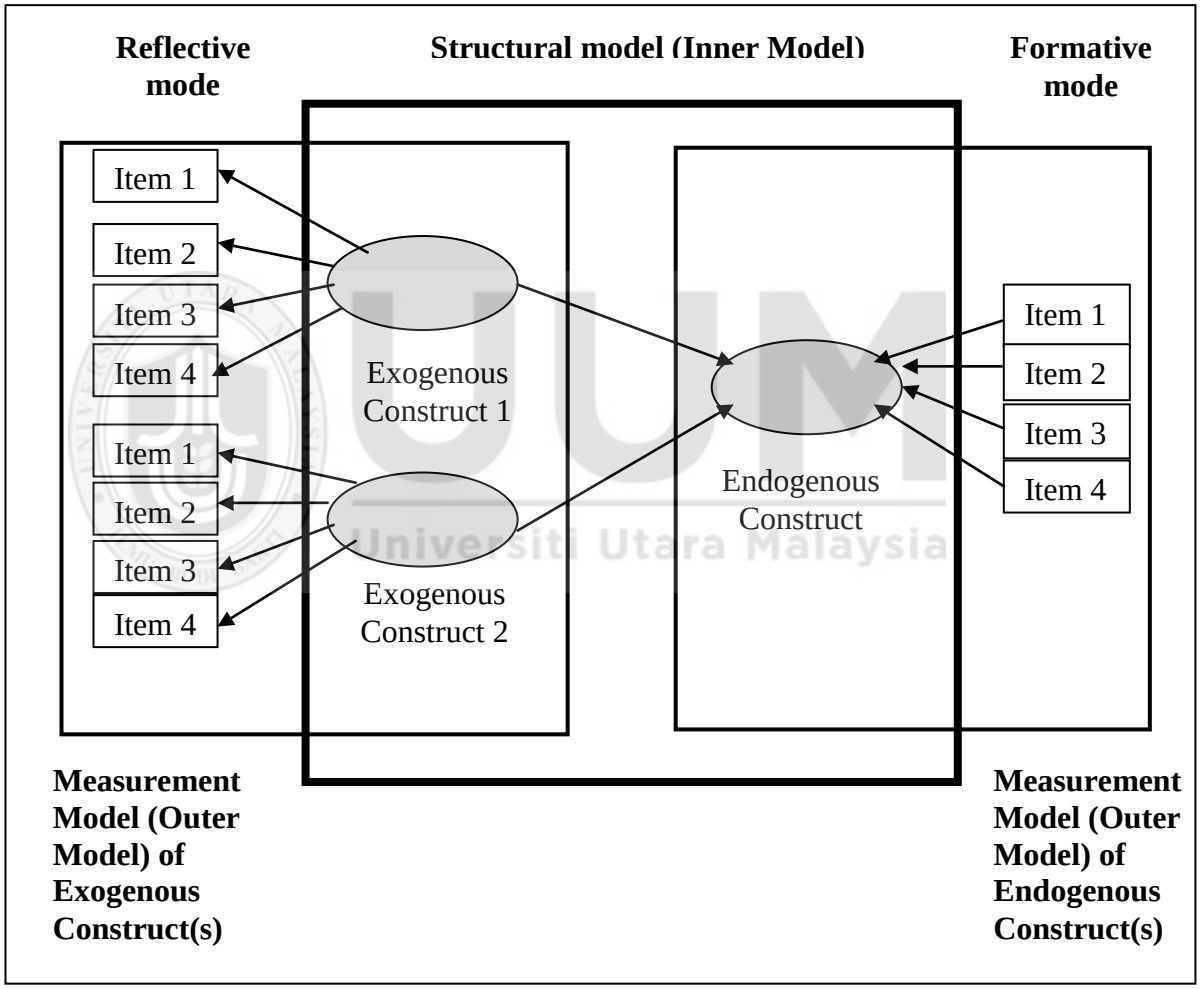

Figure 4.1
A Simple Path Model

The PLS-SEM technique is a non-parametric analysis, has no assumptions regarding data distribution. Thus, this technique is not affected by non-normality and outlier assumptions. As such, there is no requirement to test the normality distribution of the data. Nevertheless, SmartPLS program is highly sensitive to the missing values. Therefore, before analyzing the model, it is essential to treat the missing values. To check and treat the missing values, the Estimation Maximization (EM) technique was applied. EM is an effective technique that is frequently employed in data analysis to handle missing data. It enables to optimize the accuracy of the overall analysis, so that more valid inferences could be drawn from the data (Coakes, 2013). The researcher implemented EM using SPSS by choosing the command "missing value analysis" from the analyse menu.

According to Chin (1998) and Henseler et al. (2009), there are two-staged processes involved in PLS (i) the assessment of the reliability and validity of the measurement model and (ii) the assessment of the structural model, as described below.

4.10.2 Assessing the Measurement Model (Outer Model)

Assessing the measurement model involves the evaluation of validity and reliability of the indicators (items). In evaluating the measurement model, elements of the model are individually evaluated based on certain quality criteria such as reflective measurement models and formative measurement models. According to Hair, Hult et al. (2014), to assess the reflective measurement model, researchers need to verify both the reliability and validity. The first step is by using composite reliability (CR)

to assess the internal consistency reliability of the construct, which traditionally was evaluated by Cronbach's alpha. The CR values describe the degree to which the construct items consistently represent the same latent construct. Usually composite reliability focuses on the assessment of construct reliability, which refers to an estimate of internal consistency of the construct.

In PLS path model, the composite reliability is more appropriate step to perform compared to Cronbach's alpha. This is because CR concerns on indicators individual reliability of the estimated model which assumes that all the indicators have different loadings (Hair, Sarstedt et al., 2014; Henseler et al., 2009). Meanwhile, Cronbach's alpha estimates the reliability based on the inter-correlation of all the indicators in the construct, which assumes that all indicators have equal loading. Moreover, Cronbach's alpha is also sensitive to the number of items in the construct and tends to underestimate the internal consistency reliability of latent constructs (Hair, Hult et al. 2014). Due to this limitation of Cronbach's alpha, hence, CR values provides better estimate of variance shared by the respective indicators in the PLS-SEM model (Hair, Hult et al., 2014; Hair, Sarstedt et al., 2014).

The second step in assessing reflective indicators is the assessment of validity. There are two types of validity, namely, convergent validity and discriminant validity. Convergent validity refers to the extent to which the consensus of the multiple items used in the research measure the same concept. Theoretically, the items should be related to each other. Convergent validity is assessed through the outer loadings of the indicators and average variance extracted (AVE). For outer loadings, the

recommended cutoff values should be higher than 0.5 (Hair, Hult et al., 2014). The loadings between 0.4 and 0.7 need to be considered for deletion if it improves the average variance extracted or composite reliability above the recommended value. Indicators with loadings below 0.4 must be removed from the scale (Hair et al., 2011; Hair, Hult et al. 2014).

According to Hair, Sarstedt et al. (2014), AVE refers to the grand mean value of the squared loadings of a set of indicators and it is equal to the communality of a construct. AVE measures "the degree to which a latent construct explains the variance of its items" (Hair, Hult et al., 2014, p. 114). AVE value greater than 0.5 specifies that the latent constructs can describe more than half of its indicators on average (Hair et al., 2011; Henseler et al., 2009). However, when AVE is less than 0.5, this shows, on average, that the construct describes less variance in the items that remain (in error) unclarified. Convergent validity is supported when each item has outer loadings above 0.5 and when AVE of each construct is 0.5 or higher.

Discriminant validity measures the degree to which the construct completely differ from other constructs, in terms of how much it correlates with other constructs, as well as how much indicators represent only a single construct" (Hair, Hult et al., 2014). This means that the construct measures what is intended to measure. A construct is considered different from other constructs if the square root of AVE is greater than its correlations with other latent constructs. There are two methods to determine the discriminant validity of the constructs. They are cross loadings of the indicators and Fornell-Larcker criterion (Hair, Hult et al., 2014). The difference

between the two methods were cross-loading is examined at the level of indicators, while, Fornell-Larcker criteria is examined at the level of constructs.

The cross loadings method requires that the outer loadings of each indicator on its construct should be higher than the cross loadings on other constructs. If the cross loadings of other constructs higher than the indicators' outer loading then a discriminant validity problem may occur. The second method to verify discriminant validity is assessing the Fornell-Larcker criterion. The Fornell-Larker criteria states that the items should load stronger in their own constructs than with any other constructs in the model (Fornell & Larcker, 1981). This suggests that the construct shares more variance with the indicators than with any other construct. To test this requirement, it compares the square root of the AVE values with the latent variable correlations. Specifically, the square root of each AVE of the construct should be greater than its highest correlation with any other construct.

In contrast, to assess the reliability and validity of the formative measurement model, the reflective scale's statistical evaluation criteria cannot be simply copied to formative scale. A formative construct refers to indicators that cause the latent variable and cannot be exchanged between them as they are not necessarily interrelated. Furthermore, formative indicators assumed to be free of error (Edwards & Bagozzi, 2000). As such, there is no requirement for reporting indicator reliability, internal consistency reliability and discriminant validity. This is because outer loading, composite reliability, and square root of the average variance extracted (AVE) are not meant for a latent variable with uncorrelated measures. As an

alternative, the assessment of formative indexes is more based on theoretical considerations and expert opinion about the causal priority between the indicators and the latent construct (Diamantopoulos & Winklhofer, 2001).

Yet, PLS-SEM suggests certain statistical criteria for measuring the quality of formative measurement. In that respect, there are three steps involved in assessing formative measures: (a) test for weight significant; (b) test for collinearity; and (c) test of the correlation of the indicators with the latent construct. First, the significance of the weights is assessed by using a bootstrapping technique to calculate the significance of path coefficients. The associated coefficients for the formative relationships are called outer weight in PLS-SEM (Hair, Hult et al., 2014). To validate formative measures, collinearity between indicators is deemed to be a key issue. To examine collinearity, variance inflation factor (VIF) is determined and this assessment is undertaken in SPSS. Finally, the correlation of the indicators with the latent construct is tested to find out their absolute contribution. The following Table 4.16 displays the essential criteria required in the assessment of the measurement model.

Table 4.16
Criteria for Assessing Measurement Models

Criterion	Description
Reflective measurement model	
Internal consistency reliability	Composite reliability should exceed the recommended value of 0.70.
Indicator Reliability	Indicator loadings should exceed a cutoff value of 0.50.
Convergent Validity	The AVE must greater than 0.50.
Discriminant Validity	The squared root of the AVE is calculated which should be greater than each of the construct correlations (Fornell-Larcker criterion)
	An indicator's loading must be higher than all of its cross loadings.
Formative measurement model	
Outer weight	No minimum threshold values for indicator weights have been set up.
Variance Inflation Factor (VIF)	The VIF should not be greater than 5

Source: Hair et al. (2014; 2011)

4.10.3 Assessing the Structural Model (Inner Model)

Once the reliability and validity of the outer model is demonstrated, several steps need to be considered to assess the hypothesized relationships within the inner model (structure model). The assessment of the structural model involves the evaluation of the relationship between latent constructs and other latent constructs in which the hypothesis testing is conducted. By running PLS-SEM algorithm and bootstrapping, the structural model is evaluated (Chin, 2010). To facilitate the assessment of the structural model of PLS, the following criteria were used: Coefficient of determination (R^2), the effect size (f^2), significance of path coefficients and predictive relevance (Q^2).

First, R^2 refers to the predictive power of the endogenous construct in the structural model. It measures the accuracy of the prediction model. In other words, it reflects the combined effect of exogenous constructs on the endogenous construct(s) (Chin, 2010; Hair, Sarstedt et al., 2014; Henseler et al., 2009). R^2 indicates the variance in the endogenous that is explained by the exogenous constructs. The main target construct level of R^2 should be high, which ranges from 0 to 1, with 1 indicating complete predictive accuracy (Hair, Hult et al., 2014). According to Cohen (1992, 2013), R^2 values of 0.26, 0.13, or 0.02 can be a rough rule of thumb to describe substantial, moderate and weak level of predictive accuracy. For Chin (2010), R^2 values of 0.75, 0.50, or 0.25 for endogenous latent constructs are considered as substantial, moderate, and weak.

Second, the predictor constructs can be assessed by using the effect size (f^2) of Cohen (Cohen, 2013). f^2 refers to the effect of exogenous latent constructs on endogenous latent constructs through the change of R^2 (Chin, 2010). f^2 can be measured by looking at the changes in R^2 when certain constructs are eliminated from the model. To calculate f^2, a researcher needs to estimate two path models of PLS. The first path model is the entire model as specified in the hypotheses, namely R^2 of the full model (R^2 included). The second path model should be the same model with the exclusion of selected exogenous construct to be omitted from the model, namely R^2 of the reduced model (R^2 *excluded*). Based on the value of f^2, the effect size of the eliminated constructs on a specific endogenous construct can be determined at 0.02, 0.15, and 0.35, representing small, medium, and large effects, respectively (Cohen, 2013). This signifies, if an exogenous construct contributes

strongly in explaining the endogenous construct, the difference between R^2 *included* and R^2 *excluded* will be high scores in f^2. The formula to calculate the effect size is as below:

$$f^2 = \frac{R^2 included - R^2 excluded}{1 - R^2 included}$$

Third, another assessment of the structural model is to examine the significant level of path coefficients. As PLS-SEM has no assumption about normal distribution, the researcher has to use the bootstrapping procedure to determine the level of significance of the model. A bootstrapping procedure should be done to avoid the t-value from being inflated or deflated, which can lead to Type 1 error if the data are not normal. Bootstrapping is a resampling technique that makes a great number of subsamples of the original data (with replacement) and estimate the model for each subsample. In this way, the researcher has a large number of samples (usually 5000 or more) of the estimated model, which can be used to calculate the standard error for each model parameter. By drawing on the standard error, t-value can be used to determine the significance of each parameter. In this research, a large number of subsamples (e.g., 500) was taken from the original sample with replacement to provide bootstrap standard error, which in turn provides approximate t-values for significance testing of the structural path. According to Chin (1998), 500 re-samples are common suggestions for using bootstrapping to estimate a parameter. Bootstrapping results approximately equal to the normal data. PLS-SEM analysis also highly stresses on the variance explained to establish the significance of all path estimates (Hair, Sarstedt et al., 2014).

The fourth criterion to assess the structural model is through the examination of Stone-Geisser's Q^2 value. The Q^2 is a method to assess the predictive relevance of the structural model (Chin, 2010; Hair, Sarstedt et al., 2014; Henseler et al., 2009). The predictive relevance proposes that the model must be capable enough to predict each endogenous latent construct's data points of indicators. To test the predictive relevance, the approach of blindfolding procedure is proposed.

According to Hair, Hult et al. (2014), blindfolding is a technique of sample reuse to eliminate each *d*th data point in the endogenous construct's indicators and uses the residual data points to estimate the parameters. The eliminated data points assume that missing values have been treated appropriately when performing PLS-SEM algorithm. The results of such estimates are then used to predict the eliminated data points. The difference between the real (eliminated) data points and the predicted is that the latter is used as input to measure Q^2. Mostly Q^2 is estimated by the omission distance, "*d*" of 5-10 in PLS (Chin, 2010). The value of Q^2 for all the endogenous latent constructs that is larger than zero specifies that the structural model had predictive relevance for this particular construct (Hair, Hult et al., 2014; Hair, Sarstedt et al., 2014). Blindfolding procedure is merely practical to endogenous latent variables that hold a reflective measurement model specification (Hair, Hult et al., 2014). Thus, the assessment of the quality of the model is based on its ability to predict the endogenous constructs (Hair, Sarstedt et al., 2014). Table 4.17 exhibits the important criteria needed in the assessment of the structural model. The next sub-section discusses all the tests involved in testing the hypotheses of the study.

Table 4.17
Criteria for Assessing Structural Models

Criterion	Description
R Square (R^2)	According to Cohen (1992; 2013), R^2 values of 0.26, 0.13, or 0.02 for endogenous latent variables can be a rough rule of thumb, described as substantial, moderate and weak respectively.
Effect size (f^2)	$f^2 = (R^2 \text{ included} - R^2 \text{excluded})/(1 - R^2 \text{included})$. According to Cohen (2013), f^2 values of 0.35, 0.15, and 0.02 are considered large, medium, and small, respectively.
Estimates for path coefficients	Criteria *t*-value for one-tailed test is 2.33 ($p < 0.01$), and 1.645 ($p < 0.05$). Criteria *t*-value for two-tailed test is 2.58 ($p < 0.01$), and 1.96 ($p < 0.05$).
Prediction relevance (Q^2)	The value of Q^2 that is larger than zero specifies that the structural model had predictive relevance.

Source: Hair et al. (2014; 2011)

4.10.4 Testing the Direct Effect – The Two Stage Approach

As the study calls for the measurement of both reflective and formative in the same model and the applications of reflective–formative type of hierarchical component model, a direct examination of the hypothesis testing is not appropriate (Hair et al., 2013). This is because the use of the repeated indicators approach will lead to almost all variations of the higher order component being explained by its lower order component (R^2 values almost 1.0). Consequently, the path relationship from the latent variable to the endogenous higher order component is always almost zero and non-significant. Therefore, to test the hypotheses, this study employed a mixture of

repeated indicators approach and the use of latent variable score of the two-stage approach, which is similarly used by the two-stage approach in the moderator analysis in PLS-SEM (Henseler & Chin, 2010).

Generally speaking, in the first stage, latent variable scores for the lower order component must be taken using the repeated indicators approach. Later, these scores are used as manifest variables in the measurement model of the higher order component, in the second stage. Thus, the higher order component is embedded in the nomological net in a way that enables other latent variables to explain some of the previous variants, which can result in a significant path relationship (Becker, Klein, & Wetzels, 2012; Chin, 2010; Ringle, Sarstedt, & Straub, 2012).

4.10.5 Testing the Mediating Effect – Bootstrapping the Indirect Effect

To examine the mediating effect, the significance of the relationship between variables must be assessed. According to Preacher and Hayes (2004), "mediation" is a special case of "indirect effect". Recently, Hair, Hult et al. (2014, p. 223) have encouraged the use of bootstrapping for mediation analysis by stating that "when testing mediating effect, researchers should rather follow Preacher and Hayes (2004, 2008) and bootstrap the sampling distribution of the indirect effect, which works for simple and multiple mediator models". This approach provides a more superior method to the "causal procedure" popularized by Baron and Kenny (1986) since SEM is able to test the relationship of variables simultaneously (Hair, Sarstedt, Ringle et al., 2012; Preacher & Hayes, 2008).

Baron and Kenny's (1986) procedure have received a lot of criticisms due to low power and the multiple steps of procedure enhance the existence of Type 1 error, which concludes that there is mediation when actually there is no mediation effect (Hayes, 2009; Preacher & Hayes, 2004, 2008). Furthermore, some researchers have also debated that a significant total effect of a predictor variable on the criterion variable (which calculated as *c*) is not necessary for mediation to occur (Preacher & Hayes, 2008; Shrout & Bolger, 2002). Thus, failure to test the indirect effects in the absence of a total effect may cause us to overlook some of potential significant, valuable, or interesting mechanisms through which the predictor variables may impose some impact on criterion variables (Hayes, 2009).

Preacher and Hayes (2004, 2008) disputed that the path coefficient "a" and path coefficient "b" are normally distributed but the result of "a*b" cannot be normally distributed. As the Sobel test online is based on normal distribution, the test should not be used as it may produce incorrect conclusions because the indirect effect is not normally distributed. This can affect "standard error". Thus, the procedure of "bootstrapping" should be applied to solve the problem. In this regards, this study applied the new method introduced by Hayes (2009) and Preacher and Hayes (2004, 2008) to assess the mediating effect for SEM with the bootstrapping test, which is called ''bootstrapping the indirect effect".

Bootstrapping, a procedure of nonparametric resampling, has been accepted as one of the more rigorous and robust methods to test the mediating effect (Shrout & Bolger, 2002; Zhao, Lynch Jr., & Chen, 2010). Besides, this method is very suitable for PLS-

SEM as it has no assumption concerning the shape of the distribution of variables or statistical sampling, and, thus, can be used for small sizes (Hair, Hult et al., 2014; Preacher & Hayes, 2008).

According to Hayes (2009), there are several steps proposed in assessing the mediating effects. First, fit a model through SEM to estimate the relationship between the predictors and the mediator variable – path "*a*" and the relationship between the mediator and the criterion variables – path "*b*" to determine mediation. The bootstrapping is performed to get the t-values to assess the direct relationships. Mediation test is suggested when the direct relationships are significant.

Second, once the bootstrapping is performed, then the 500 bootstrapped direct effects are produced, i.e. path "*a*" and path "*b.* Since the indirect effects need to be calculated manually, i.e. the path coefficients for "a*b", the bootstrapping indirect effects for all the mediation hypotheses are created by taking the product of each indirect path.

Third, Standard Errors (SE) for all indirect effects is calculated. To calculate SE, the function "STDEV" in Excel spreadsheet is used because data is already standardized in SmartPLS. Then the SE is used to calculate the t-values for all indirect effects. The formula below is used to calculate the t-value.

$$t = \frac{\text{Indirect Effect}}{\text{Standard Error}}$$

$$t = \frac{a*b}{S_{error}}$$

Fourth, to further confirm the mediation effects, the 95% bootstrapped confidence interval (95% Boot CI) for all indirect effects is calculated using the following formula:

Lower limit (LL)	=	a*b – Z (SE)
Upper Limit (UL)	=	a*b + Z (SE)
(Z value, for 0.05 level is 1.96)		

4.10.6 Testing the Moderating Effect – The Two Stage Approach

Moderating effects are variations of variables that can affect the strength or direction of a relationship between an exogenous and an endogenous latent construct (i.e. simple effect). A moderator variable can be described as a third variable that alters the linkage between independent variable and dependent variable, which is generally known as contingent variable. To model moderator variables in PLS-SEM, researchers need to include an interaction term accounting the interrelation between the exogenous latent variable and the moderator variable. Unlike mediation, moderation focuses on the R^2 change when the interaction terms are added to test of the interaction effects. There are two well-known concepts in modeling the interaction term. They are product indicator approach and two-stage approach. Because this study involved both reflective and formative measurements in the same model, the two-stage approach was used to test the moderation effects (Hair, Hult et al., 2014).

4.11 Summary

This chapter articulated the methodology used in the study. It highlighted specifically the research approach, population and sampling procedures, data collection procedure, research instruments, and data analysis techniques used to meet the objectives of the present study. In the next chapter, results of the analyses are presented.

CHAPTER FIVE

FINDINGS

5.1 Introduction

This chapter shows the results of the statistical data analysis, organized into four key sections. First are the results of the descriptive statistics of the profile of manufacturing SMEs and the characteristics of the respondents. The second section maps the results of Harman's single factor test to examine common method bias. The third deals with goodness of measures. Finally, the results of hypothesis testing and the predictive relevance of the model are presented.

5.2 Response Rate

A total of 531 questionnaires was distributed to the owners/managers of SMEs in the west coast of Peninsular Malaysia. This area was selected due to the high concentration of SMEs. All SMEs selected showed their willingness to take part in the survey. Table 5.1 shows the response rate of the sampled SMEs by state.

Table 5.1
Participating SMEs and Response Rate

State	Total SMEs	Sample Identified	Returned Questionnaires	Usable Questionnaires
Kedah	235	53	51	51
Penang	595	78	62	59
Selangor	1,893	126	79	78
FT Kuala Lumpur	439	69	68	67
Johor	492	74	46	44
Perak	281	58	11	9
Melaka	235	51	7	6
Negeri Sembilan	122	22	8	7
Perlis	11	-	-	-
Total	**4303**	**531**	**332**	**321**
Response rate: 60.5%				

Of the 531 questionnaires distributed, 332 were returned. Nonetheless, 11 cases were omitted, of which five were incomplete and six were answered by non-managers. Hence, only 321 questionnaires which represented a valid response rate of 60.5% were used for data analysis. It was with tremendous effort, hard work and extra financial cost that this response rate was obtained. The response rate was also relatively high because of the use of self-administered questionnaire (Farouk, Elanain, Obeidat, & Al-Nahyan, 2016) in comparison to other studies on SME in Malaysia that mostly used mail approach (eg., Ahmed, Masjuki, & Taha, 2004; Daud & Mohamad, 2010; Osman et al., 2011a; Sohail & Hoong, 2003).

This study also followed the power calculation by Chin (1998) to ensure that the data had enough statistical power. Using the procedure, the researcher multiplied the number

of paths that led to the endogenous construct by 10. Because most paths leading to the endogenous construct of organizational innovation were seven, a minimum sample size of 70 would be sufficient. Hence, the sample size of 321 was considered enough to reach an acceptable level of statistical power in PLS. Also, the sample size of this study complied with the rule of thumb by Roscoe (1975, cited in Sekaran (2003), who stated that the appropriate sample size for most research should be larger than 30 and smaller than 500. In addition to the '10 times' rule of thumb, the sample size in this study also met the requirement of G*Power (Faul et al., 2007), which was discussed in the previous chapter.

After data collection, the next stage was the data preparation using SPSS 20. Firstly, the Estimation Maximization (EM) was used to check and treat the missing values. EM is a tool that optimizes the accuracy of the overall analysis so that more valid inferences could be drawn from the data (Coakes, 2013). Missing values were derived from the probability of parameter estimates.

5.3 Profile of Respondents

This section presents the demographic profile of the respondents (i.e. owners/managers) and the responding firms, as shown in Table 5.2 and Table 5.3 (refer Appendix B for details on descriptive output).

5.3.1 Profile of Manufacturing SMEs

The firm profile is illustrated in Table 5.2. The table reveals that the majority of the manufacturing SMEs that participated in this study had been operating for 16 to 20 years (43.6%), followed by 11 to 15 years (24%) and 5 to 10 years (18.7%), while those operating under 5 years and above 20 years accounted for 5.9% and 7.8%, respectively. The table also shows more than 68% of the responding firms were medium-sized firms (50 to 150 employees), and only 31.2% were small firms (5 to 49 employees). In terms of ownership status, the majority of the firms belonged to Bumiputera (more than 70%), while only 7.5% of the firms were a joint venture between a local and a foreign company.

The table also indicates that of eight locations, Selangor and Federal Territory of Kuala Lumpur recorded the highest number of manufacturing SMEs that participated in this study with each accounting for 24.3% and 20.9%, respectively. Penang, Kedah and Johor represented the second largest participation of SMEs (18.4 %, 15.9 %, and 13.7%, respectively). The participation of manufacturing SMEs mirrored the actual population of SMEs in that more than 90% of them were from these five states. Perak, Negeri Sembilan and Melaka had the lowest participation; only 6.9% of manufacturing SMEs that participated were from these three states. In addition, food and beverages (F & B) sector appeared to participate the most (19.9%). Other manufacturing companies that took part in this study were component parts, industrial and engineering

products (14.6%), chemicals, plastic and rubber products (12.8%), electrical and electronic products (10.9%), packaging, labelling and printing (9%), building materials and related products (8.7%), and pharmaceutical, medical equipment, cosmetics, toiletries, stationery and household (8.4%). A small percentage (4.7%) of furniture and wood related products, iron and steel products, textiles and wearing apparel participate.

Table 5.2
Profile of Sampled Firms (n = 321)

Demographic Variables	Category	Frequency	%age
Organizational Tenure	Less than 5 years	19	5.9
	5-10 years	60	18.7
	11-15 years	77	24
	16-20 years	140	43.6
	More than 20 years	25	7.8
Number of employees	5-49 employees	100	31.2
	50-150 employees	221	68.8
Ownership status	Local company:	295	91.9
	Bumiputera	239	74.5
	Non-bumiputera	50	15.6
	Joint local-foreign company	24	7.5

Table 5.2 (continued)

Demographic variables	Category	Frequency	%age
Location	Johor	44	13.7
	Kedah	51	15.9
	Melaka	6	1.9
	Negeri Sembilan	7	2.2
	Pulau Pinang	59	18.4
	Perak	9	2.8
	Selangor	78	24.3
	FT KL	67	20.9
Type of industry	Automotive, component parts, industrial & engineering products	47	14.6
	Building materials & related products	28	8.7
	Chemicals, plastic and rubber products	41	12.8
	Electrical & electronic products	35	10.9
	Food and beverages	64	19.9
	Furniture & wood related products	15	4.7
	Iron & steel products	15	4.7
	Packaging, labelling & printing	29	9
	Pharmaceutical, medical equipment, cosmetics, toiletries, stationary & household	27	8.4
	Textiles & wearing apparel	15	4.7
	Others	4	1.3

5.3.2 Profile of Owners/Managers

Table 5.3 shows that more than half of the owners/managers were male (66.7%). In terms of age, close to half of them were relatively young 145 (45.2%) within the age of 31 to 40 years old, followed by those of the age of 41 to 50 (31.2%), below 30 (11.8%) and 51 to 60 (10.6%). In terms of race, almost half were Chinese (46.7%), followed by Malays (39.3%), Indians (11.5%), and others (0.3%). For education, 41.4% had diploma, 38.3% had a bachelor's degree, 49% secondary school, and 3.7 % possessed a master's degree.

Regarding job tenure, 112 respondents (34.9%) had been working at the current firm between 5 and 10 years, 81 respondents (25.2%) had less than 5 years of working experiences, 53 respondents (16.5%) between 11 and 15 years, 49 respondents (15.3%) between 16 and 20 years, while 11 respondents (3.4%) more than 20 years. In terms of job position, 31.5% of the respondents were human resource manager, 20.6% business owner, and 20.2% senior manager. Less than 15% were business partner (11.5%) and general manager (10%), while 5.9% held other positions such as listed in the Table 5.3.

Table 5.3
Profile of Respondents (n = 321)

Demographic Variables	Category	Frequency	%age
Gender	Male	214	66.7
	Female	107	33.3
Age	Below 30	38	11.8
	31-40	145	45.2
	41-50	100	31.2
	51-60	34	10.6
	61 and above	2	0.6
Race	Malay	126	39.3
	Chinese	150	46.7
	Indian	37	11.5
	Others: Sikh	1	0.3
Education	Masters	12	3.7
	Bachelor	123	38.3
	Diploma	133	41.4
	Secondary school	49	15.3
	Primary school	2	0.6
	Others: Skill Certification	2	0.6
Job Tenure	Less than 5 years	81	25.2
	5-10 years	112	34.9
	11-15 years	53	16.5
	16-20 years	49	15.3
	More than 20 years	11	3.4

Table 5.3 (Continued)

Demographic Variables	Category	Frequency	%age
	Business owner	66	20.6
	Business partner	37	11.5
	General manager	32	10
	Senior manager	65	20.2
	Human resource manager	101	31.5
	Others	19	5.9
Job Position	Business development manager	1	0.3
	Quality control	1	0.3
	Food technologist	1	0.3
	Marketing manager	4	1.2
	Sale manager	5	1.6
	Finance manager	2	0.6
	Logistic manager	1	0.3
	Procument manager	1	0.3
	Trainee manager	1	0.3

5.4 Non-response Bias

Because of the way the data were collected personally by the researcher, testing non-response bias could not be carried out. This is because all owners/managers were given two weeks to fill in the questionnaires, after which the researcher personally collected them. In this manner, the difference between those who responded earlier and later was non issue.

5.5 Common Method Variance

Common method variance (CMV) refers to variance attributable to measurement method rather than to the construct of interest (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In research, variations remain a potential problem once the same persons give self-reported data to assess items for the dependent and independent variables (Podsakoff et al., 2003; Richardson, Simmering, & Sturman, 2009). As this study gathered information from a single respondent, there was possibility of common method variance. As suggested by Podsakoff et al. (2003) and Chang, van Witteloostuijn, and Eden (2010), the researcher administered pre- and post-remedies to minimize the impact of CMV. As for pre remedy, different scale types were employed and the labels of each section in the questionnaire were removed.

After data collection, the researcher conducted a post remedy to verify whether a significant amount of CMV was still a threat. The most widely used technique to inspect whether variations in the data occurred primarily due to a single factor is the Harman's single factor test. According to Podsakoff and Organ (1986), this technique assumes that a common bias occurs in the data if a single factor appears from factor analysis for all items in the study. CMV is also a threat if a general factor represents the most common variation in the existing data.

To check for CMV, the researcher used SPSS to perform Harman's single factor test. The test procedure involved loading all items for exploratory factor analysis and examined the unrotated factor solution by using the factors to extract one criterion. The analysis showed that the first factor contributed only 23.93 % of the variance in the data. No single factor emerged and the first factor did not explain most of the variance. Hence, it was concluded that common method variance was not a threat in this study. The result of this test is shown in Appendix C.

5.6 Testing goodness of the measurement

According to Chin (1998) and Henseler et al. (2009), there are two-staged processes involved in PLS: (i) the assessment of the reliability and validity of the measurement model and (ii) the assessment of the structural model. The goodness of measurement was assessed for the purpose of confirming the validity and reliability of the measurement items. The researcher performed Confirmatory Factor Analysis (CFA) to validate the measurement model (outer model) by examining the relationship between items/indicators and their respective underlying construct, using PLS-SEM software called SmartPLS 2.0.M3 developed by Ringle, Wende, and Will (2005).

Since the model of this study contains first- and second-order constructs (higher-order construct), assessing the measurement model included both constructs. The first-order construct refers to the relationship between the indicators and their dimensions, while

the second-order construct denotes the relationship between the dimensions and the latent constructs, as shown in Figure 5.1. The research model is shown in Figure 5.2, which displays the loading for each item and beta values.

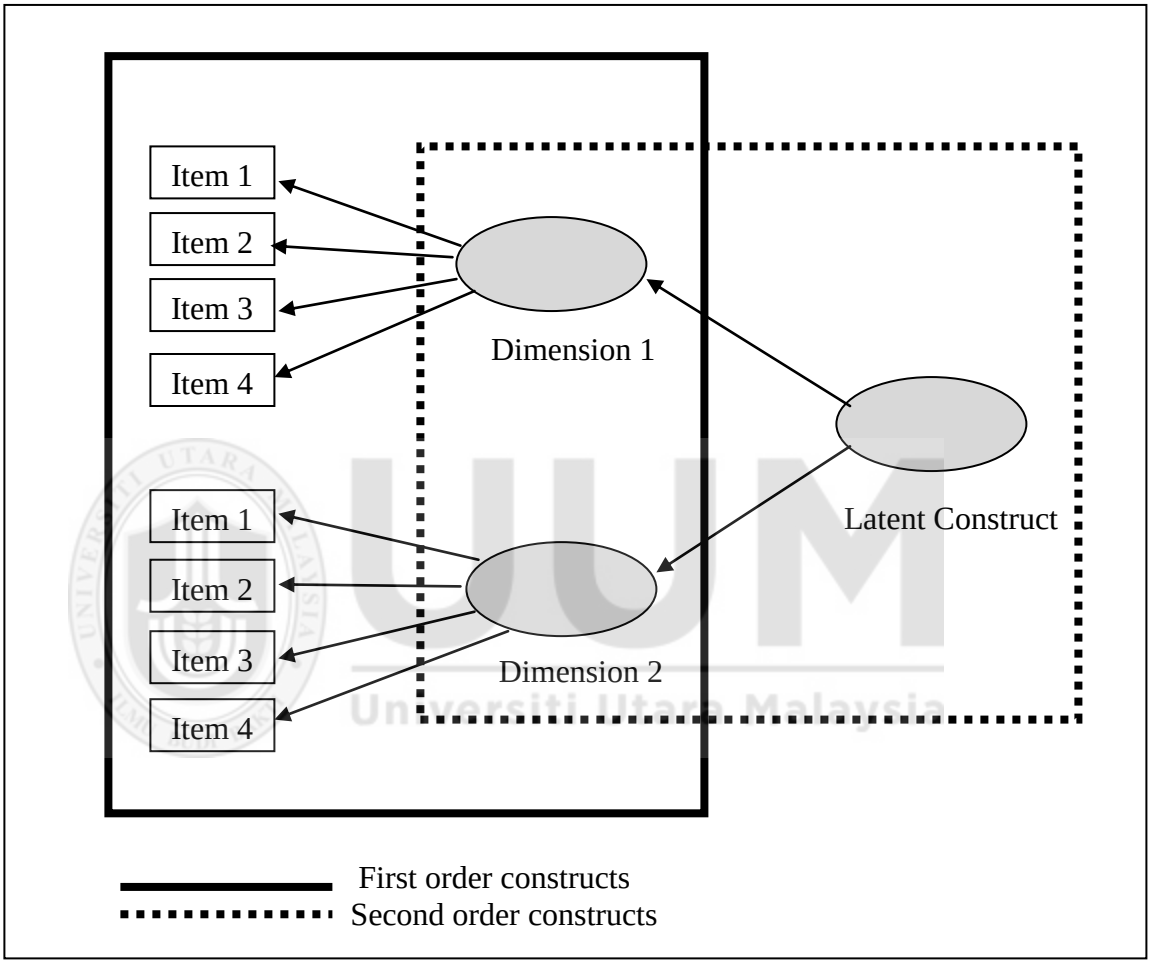

Figure 5.1
Example of first- and second-order constructs

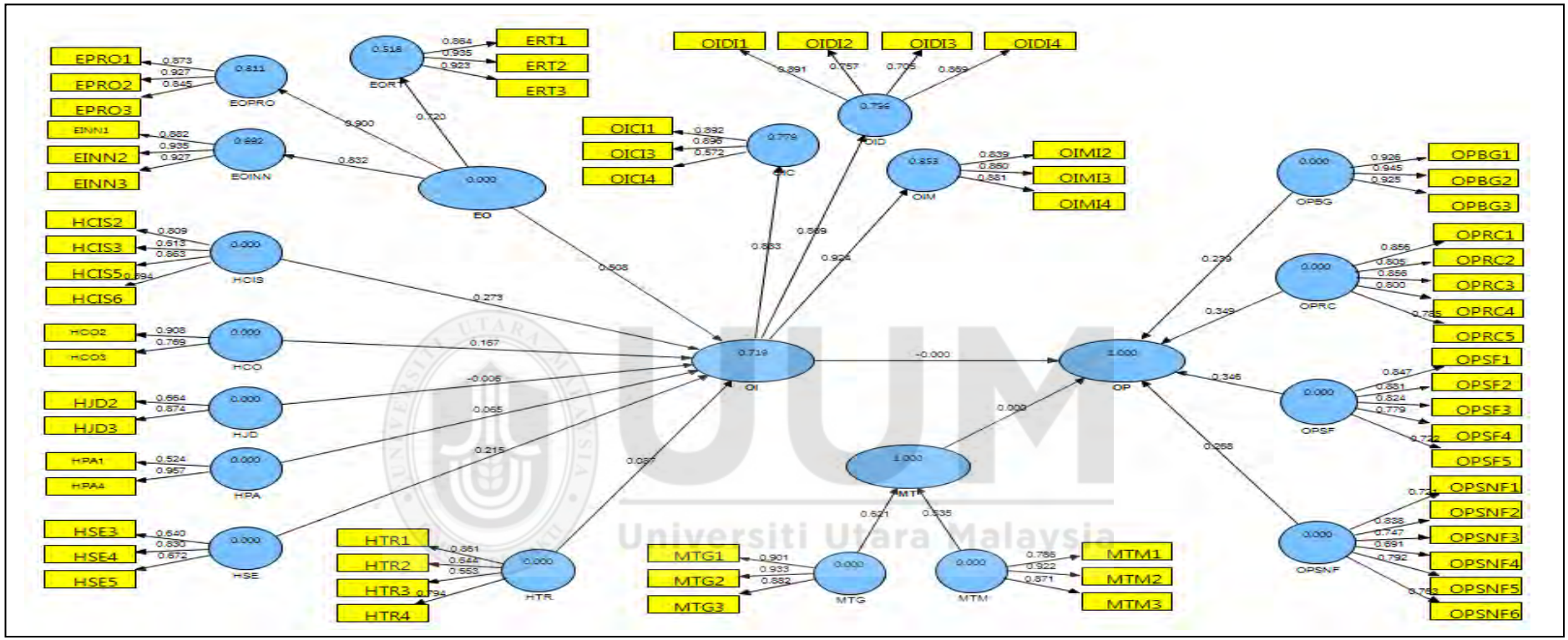

Figure 5.2

Research model of the study

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

5.6.1 Assessment of Reflective Measurement Model

In PLS, the reliability of individual item/construct is assessed by inspecting the item loadings on their latent construct respectively (Hulland, 1999). The higher loadings mean that there is more variance shared between the construct and measurement rather than an error variance, whereas low loadings show that the power of model explanation is highly small which reduces the estimated parameters linking the constructs (Hulland, 1999). For reflective measurement model, the indicators are closely related and interchangeable and their reliability and validity should be reviewed and reported in detail. Thus, to assess the measurement model, the researcher verified both reliability and validity. Reliability was measured through composite reliability and validity was assessed by convergent and discriminant validity. CFA was conducted to assess internal consistency (e.g. composite reliability), convergent validity (e.g. average variance extracted) and discriminant validity (i.e. cross loadings and Fornell-Larcker criterion) of the instruments. This is to confirm that the measurements are reliable and valid before assessing the relationships in the structural model.

5.6.1.1 Composite Reliability

To assess the internal consistency reliability of the construct, composite reliability (CR) was determined. In this procedure, all items' loadings for reflective constructs were tested to exceed a cutoff value of 0.5, as recommended by Hair, Hult et al. (2014). Table

5.4 shows that all items were loaded on their respective constructs item. All the item loadings exceeded the recommended cutoff value of 0.5. The loadings ranged from 0.524 to 0.957, which indicated that more than half of the variance in the observed variable is explained by the constructs. Items with loadings below 0.5 were deleted step by step to achieve significant threshold value of internal consistency of the construct. For reflective scale, items that were deleted might not affect the conceptual meaning of the particular construct as long as it retains adequate internal consistency. This is because the direction of causality flows from construct to items demonstrated the items represent the effects. Therefore, the items are highly correlated because they are caused by the same underlying construct (Hair, Hult et al., 2014; MacKenzie, Podsakoff, & Jarvis, 2005). In this study, the result revealed that the internal consistency of all the constructs was within acceptable range after the items were deleted from the scale. The CR values of ten reflective latent constructs ranged from 0.731 to 0.952 that exceeded the recommended cutoff value of 0.7 (Hair, Black, Babin, & Anderson, 2010). Therefore, all constructs showed high level of internal consistency reliability.

5.6.1.2 Convergent Validity

To assess convergent validity, the average variance extracted (AVE) was determined. Table 5.4 exhibits the convergent validity, which revealed that the AVE values of all latent constructs were greater than the acceptable threshold of 0.5 and the values were in the range of 0.517 and 0.868. The AVE value greater than 0.5 specified that the latent construct explained more than half of the variance of its indicators.

Table 5.4 summarizes the result of the measurement model. The result showed that all 10 main constructs, namely, entrepreneurial orientation, communication and information sharing, compensation, job design, performance appraisal, selection, training, organizational innovation, managerial ties, and organizational performance were valid measures of their respective constructs based on their parameter estimates and statistical significance (Chow & Chan, 2008). Hence, the model constructs had sufficient convergent validity.

5.6.1.3 Assessment of Formative Constructs

In this study, there were two latent variables modeled as second-order formative constructs. They were managerial ties and organizational performance. Three steps were involved in assessing formative measures: (i) test for weight significant; (ii) test for multi-collinearity; and (iii) test of the correlation of the indicators with the latent construct. First, the significance of the weights was assessed by using a bootstrapping technique to calculate the significance of path coefficients. The associated coefficients for the formative relationships are called outer weight in PLS-SEM (Hair, Hult et al., 2014). As the interpretation of the weights is similar to beta coefficients in a standard regression model, it is usual to have lower absolute weights as compared to loadings. No minimum threshold values for indicator weights was set up. This study found that all specified paths between the constructs had significant path coefficients. The statistical

significance of weights implies the relative importance of indicators in forming a latent construct.

Next, multi-collinearity between indicators was tested. To examine multi-collinearity, variance inflation factor (VIF) was determined by using SPSS (refer Appendix D). Researchers propose that VIF should not be greater than 5 (Hair, Hult et al., 2014). The analysis demonstrated that all items had VIF of less than 5, indicating no threat of multi-collinearity between the different indicators (Luk et al., 2008; Moreno & Casillas, 2008). Finally, the correlation of the indicators with the latent construct was tested to find out their absolute contribution. Result revealed that all items had a significant weight and were correlated to the latent constructs. Consequently, all items in the formative construct were retained for further analysis. Table 5.4 presents the result.

Table 5.4

Results Summary for Reliability and Validity of the Constructs

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	AVE	CR	Item(s) deleted due to low loadings
Innovativeness		Reflective	EINN1	0.882	0.837	0.939	None
			EINN2	0.935			
			EINN3	0.927			
Proactiveness			EPRO1	0.873	0.778	0.913	None
			EPRO2	0.927			
			EPRO3	0.845			
Risk Taking			ERT1	0.864	0.824	0.934	None
			ERT2	0.935			
			ERT3	0.923			
	Entrepreneurial Orientation(EO)	Reflective	Innovativeness	0.832	0.674	0.860	None
			Proactiveness	0.900			
			Risk Taking	0.720			
Communication & Information Sharing (HCIS)		Reflective	HCIS2	0.809	0.532	0.816	HCIS1, HCIS4
			HCIS3	0.613			
			HCIS5	0.863			
			HCIS6	0.594			
Compensation (HCO)		Reflective	HCO2	0.908	0.708	0.828	HCO1, HCO4
			HCO3	0.769			
Job Design (HJD)		Reflective	HJD2	0.664	0.602	0.748	HJD1
			HJD3	0.874			

Table 5.4 (Continued)

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	AVE	CR	Item(s) deleted due to low loadings
Performance Appraisal (HPA)		Reflective	HPA1	0.524	0.596	0.731	HPA2, HPA3
			HPA4	0.957			
Selection (HSE)		Reflective	HSE3	0.640	0.517	0.760	HSE1, HSE2, HSE6
			HSE4	0.830			
			HSE5	0.672			
Training (HTR)		Reflective	HTR1	0.861	0.523	0.810	None
			HTR2	0.644			
			HTR3	0.553			
			HTR4	0.794			
Process Innovation		Reflective	OICI1	0.892	0.642	0.838	OIC2, OIC5, OIC6
			OICI3	0.896			
			OICI4	0.572			
Product Innovation		Reflective	OIDI1	0.891	0.655	0.883	None
			OIDI2	0.757			
			OIDI3	0.705			
			OIDI4	0.869			
Managerial Innovation		Reflective	OIMI2	0.839	0.740	0.895	OIM1, OIM5
			OIMI3	0.860			
			OIMI4	0.881			
	Organizational Innovation (OI)	Reflective	Process Innovation	0.883	0.796	0.921	OIC2, OIC5, OIC6, OIM1, OIM5
			Product Innovation	0.869			
			Managerial Innovation	0.924			

Table 5.4 (Continued)

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	AVE	CR	Item(s) deleted due to low loadings
Managerial Ties with Government (MTG)		Reflective	MTG1	0.901	0.820	0.932	None
			MTG2	0.933			
			MTG3	0.882			
Managerial Ties with Managers (MTM)		Reflective	MTM1	0.786	0.742	0.896	None
			MTM2	0.922			
			MTM3	0.871			
First Order Construct	**Second Order Construct**	**Scale Type**	**Item**	**Weights**	**VIF**	**t-value**	**Item(s) deleted due to low loadings**
	Managerial Ties (MT)	Formative	MTG	0.621	1.315	27.246**	None
			MTM	0.535	1.315	26.678**	
First Order Construct	**Second Order Construct**	**Scale Type**	**Item**	**Loadings**	**AVE**	**CR**	**Item(s) deleted due to low loadings**
Business Growth (OPBG)		Reflective	OPBG1	0.926	0.868	0.952	None
			OPBG2	0.945			
			OPBG3	0.925			
Performance Relative to Competitor (OPRC)		Reflective	OPRC1	0.856	0.674	0.912	None
			OPRC2	0.805			
			OPRC3	0.856			
			OPRC4	0.800			
			OPRC5	0.785			

Table 5.4 (Continued)

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	AVE	CR	Item(s) deleted due to low loadings
Satisfaction Financial performance (OPSF)		Reflective	OPSF1	0.847	0.660	0.906	None
			OPSF2	0.881			
			OPSF3	0.824			
			OPSF4	0.779			
			OPSF5	0.722			
Satisfaction Nonfinancial Performance (OPSNF)		Reflective	OPSNF1	0.721	0.578	0.891	None
			OPSNF2	0.838			
			OPSNF3	0.747			
			OPSNF4	0.691			
			OPSNF5	0.792			
			OPSNF6	0.763			
First Order Construct	**Second Order Construct**	**Scale Type**	**Item**	**Weights**	**VIF**	**t-value**	**Item(s) deleted due to low loadings**
	Organizational Performance (OP)	Formative	OPBG	0.239	2.072	24.906**	None
			OPRC	0.349	2.735	31.945**	
			OPSF	0.346	2.842	32.919**	
			OPSNF	0.268	1.360	15.726**	

Note: AVE (Average Variance Extracted) = (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}; Composite Reliability (CR) = (square of the summation of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the square of the error variances)}; VIF= Variance Inflation Factor**.**
*p < 0.05(t = 1.645); **p < 0.01(t = 1.96)

5.6.1.4 Discriminant Validity

To assess discriminant validity, two measures were involved. They were cross-loadings and Fornell-Larcker criterion. First, the analysis on cross-loadings of the items was conducted. According to Hair et al. (2010) and Chin (1998), the standardized loading estimates should be 0.5 or higher and ideally 0.7 or higher. The items with very low loadings (below 0.4) should be deleted (Hair, Hult et al., 2014; Hair et al., 2011). Additionally, all measures of the construct should be significantly loaded onto their respective construct. Table 5.5 exhibits the outer loadings of the item were greater than the cross-loadings of other constructs, which were greater than 0.5. As expected, all indicators loaded onto their underlying constructs well, suggesting no cross loadings existed among indicators.

Second, the Fornell-Larcker criterion proposes that more variance is shared by a latent construct with its own indicators than with other latent construct in the structural model (Fornell & Larcker, 1981). Agreeing to this criterion, the squared root of the AVE (represented by the values in the diagonal) calculated should be greater than each of the construct correlations (represented by the values in the off-diagonal) (Hair, Hult et al., 2014). Table 5.6 shows discriminant validity for first-order constructs and Table 5.7 for second-order constructs. Both tables illustrate that all the square root of the AVE values was larger than other correlation values among the latent variables, indicating that several constructs used in the model belong to distinct entities. In essence, the measurement model displayed good discriminant validity among constructs.

Table 5.5

Loadings and Cross Loadings

	EOINN	EOPRO	EORT	HCIS	HCO	HJD	HPA	HSE	HTR	MTG	MTM	OIC	OID	OIM	OPBG	OPRC	OPSF	OPSNF
EINN1	**0.882**	0.699	0.390	0.475	-0.153	0.025	0.227	0.445	0.492	-0.102	-0.153	0.664	0.690	0.697	0.658	0.435	0.476	0.268
EINN2	**0.935**	0.610	0.291	0.568	-0.072	0.139	0.199	0.485	0.403	-0.011	-0.179	0.617	0.732	0.747	0.693	0.582	0.532	0.287
EINN3	**0.927**	0.597	0.250	0.591	-0.031	0.220	0.189	0.504	0.408	-0.028	-0.208	0.662	0.721	0.768	0.641	0.506	0.479	0.278
EPRO1	0.527	**0.873**	0.586	0.200	-0.062	0.033	0.266	0.254	0.228	0.023	0.124	0.353	0.477	0.466	0.444	0.404	0.525	0.311
EPRO2	0.725	**0.927**	0.458	0.375	-0.108	0.123	0.224	0.484	0.383	-0.048	-0.120	0.646	0.687	0.692	0.638	0.493	0.571	0.309
EPRO3	0.592	**0.845**	0.366	0.246	-0.095	0.134	0.134	0.454	0.288	-0.159	-0.122	0.568	0.514	0.596	0.533	0.335	0.415	0.199
ERT1	0.283	0.461	**0.864**	0.020	0.106	0.038	0.202	0.004	0.054	0.162	0.227	0.146	0.331	0.196	0.200	0.362	0.393	0.451
ERT2	0.319	0.531	**0.935**	0.046	-0.017	-0.035	0.261	-0.035	0.057	0.057	0.191	0.189	0.406	0.197	0.219	0.276	0.369	0.388
ERT3	0.331	0.472	**0.923**	0.084	-0.010	0.061	0.212	0.008	0.049	0.211	0.271	0.177	0.428	0.182	0.192	0.349	0.418	0.462
HCIS2	0.482	0.200	0.028	**0.809**	0.079	0.265	0.240	0.407	0.439	0.084	-0.102	0.422	0.457	0.478	0.367	0.315	0.156	0.227
HCIS3	0.286	0.116	-0.027	**0.613**	0.203	0.283	0.099	0.428	0.279	0.178	-0.027	0.297	0.281	0.286	0.202	0.256	0.180	0.062
HCIS5	0.590	0.391	0.081	**0.863**	-0.058	0.230	0.279	0.455	0.486	-0.119	-0.201	0.478	0.547	0.555	0.466	0.242	0.241	0.168
HCIS6	0.223	0.075	0.079	**0.594**	0.137	0.268	0.254	0.201	0.166	-0.032	0.019	0.150	0.275	0.146	0.104	0.159	0.118	0.147
HCO2	-0.093	-0.071	0.039	0.054	**0.908**	0.065	0.207	0.093	-0.007	0.280	0.177	-0.188	-0.125	-0.120	-0.153	0.060	-0.005	0.000
HCO3	-0.067	-0.107	-0.009	0.081	**0.769**	0.141	0.165	0.139	0.027	0.187	0.054	-0.124	-0.103	-0.056	-0.174	-0.026	-0.100	-0.011
HJD2	0.090	0.064	-0.053	0.177	0.026	**0.664**	0.073	0.280	0.096	0.167	0.121	0.140	0.090	0.097	0.080	0.225	0.197	0.028
HJD3	0.117	0.099	0.062	0.320	0.128	**0.874**	0.237	0.256	0.191	0.082	0.094	0.107	0.221	0.144	0.070	0.116	0.094	0.167
HPA1	0.059	0.048	0.219	0.184	0.210	0.213	**0.524**	0.035	0.325	0.102	0.241	0.058	0.132	0.053	0.012	0.047	0.092	0.293
HPA4	0.236	0.257	0.209	0.277	0.182	0.175	**0.957**	0.215	0.174	0.118	0.178	0.145	0.254	0.201	0.121	0.183	0.145	0.142
HSE3	0.207	0.222	0.030	0.316	0.198	0.264	0.171	**0.640**	0.275	0.125	0.068	0.233	0.304	0.278	0.171	0.246	0.179	0.125
HSE4	0.551	0.499	0.043	0.414	-0.025	0.210	0.220	**0.830**	0.504	-0.137	-0.136	0.468	0.398	0.527	0.455	0.302	0.313	0.092

Table 5.5 (Continued)

HSE5	0.273	0.158	-0.113	0.409	0.198	0.291	0.016	**0.672**	0.278	0.170	-0.086	0.416	0.226	0.281	0.234	0.269	0.135	-0.089
HTR1	0.511	0.356	0.054	0.502	-0.066	0.145	0.183	0.453	**0.861**	0.010	-0.123	0.424	0.414	0.519	0.371	0.287	0.189	0.107
HTR2	0.141	0.110	0.081	0.263	0.184	0.143	0.133	0.233	**0.644**	0.187	0.139	0.112	0.098	0.166	0.101	0.171	0.156	0.115
HTR3	0.127	0.129	0.064	0.153	0.109	0.179	0.269	0.236	**0.553**	0.165	0.239	0.107	0.124	0.147	0.068	0.199	0.190	0.147
HTR4	0.350	0.247	0.018	0.395	0.010	0.155	0.210	0.447	**0.794**	0.063	0.034	0.363	0.306	0.400	0.323	0.233	0.181	0.155
MTG1	-0.074	-0.045	0.120	-0.049	0.275	0.109	0.097	0.002	0.051	**0.901**	0.456	-0.103	-0.036	-0.133	-0.081	0.206	0.148	0.107
MTG2	-0.053	-0.077	0.096	0.031	0.306	0.119	0.094	0.073	0.084	**0.933**	0.443	-0.064	-0.015	-0.084	-0.085	0.201	0.138	0.165
MTG3	-0.018	-0.047	0.208	0.063	0.191	0.168	0.176	-0.006	0.087	**0.882**	0.439	-0.031	0.063	-0.028	-0.042	0.264	0.164	0.287
MTM1	-0.433	-0.218	0.176	-0.326	0.186	0.027	0.189	-0.259	-0.159	0.452	**0.786**	-0.420	-0.296	-0.494	-0.365	-0.054	0.016	0.121
MTM2	-0.064	0.055	0.260	-0.061	0.074	0.161	0.233	-0.030	0.070	0.393	**0.922**	-0.035	0.020	-0.174	0.003	0.181	0.257	0.295
MTM3	-0.022	0.048	0.213	0.003	0.131	0.148	0.170	0.029	0.074	0.428	**0.871**	0.030	0.019	-0.146	0.052	0.213	0.272	0.267
OICI1	0.629	0.540	0.199	0.384	-0.151	0.142	0.116	0.460	0.333	-0.122	-0.195	**0.892**	0.650	0.633	0.528	0.375	0.322	0.161
OICI3	0.692	0.556	0.128	0.511	-0.253	0.092	0.126	0.485	0.489	-0.101	-0.213	**0.896**	0.654	0.699	0.617	0.371	0.371	0.189
OICI4	0.283	0.244	0.139	0.301	0.037	0.176	0.123	0.341	0.111	0.169	0.196	**0.572**	0.358	0.235	0.218	0.296	0.278	0.078
OIDI1	0.699	0.545	0.359	0.555	-0.129	0.243	0.206	0.445	0.344	-0.006	-0.093	0.636	**0.891**	0.632	0.540	0.429	0.399	0.314
OIDI2	0.552	0.450	0.365	0.356	-0.027	0.182	0.224	0.338	0.239	0.176	0.067	0.437	**0.757**	0.487	0.415	0.427	0.465	0.374
OIDI3	0.496	0.438	0.477	0.353	-0.001	0.112	0.346	0.072	0.229	0.056	0.096	0.335	**0.705**	0.402	0.310	0.264	0.317	0.444
OIDI4	0.730	0.603	0.279	0.522	-0.210	0.150	0.154	0.457	0.422	-0.124	-0.247	0.780	**0.869**	0.740	0.621	0.404	0.439	0.266
OIMI2	0.663	0.652	0.325	0.313	-0.063	0.078	0.180	0.381	0.325	-0.178	-0.233	0.557	0.572	**0.839**	0.506	0.325	0.356	0.275
OIMI3	0.671	0.504	0.141	0.522	-0.131	0.208	0.178	0.382	0.419	-0.004	-0.273	0.518	0.627	**0.860**	0.533	0.383	0.361	0.314
OIMI4	0.739	0.557	0.091	0.600	-0.094	0.125	0.143	0.593	0.559	-0.056	-0.291	0.727	0.669	**0.881**	0.615	0.421	0.388	0.172
OPBG1	0.656	0.537	0.242	0.416	-0.113	0.092	0.171	0.354	0.287	-0.032	-0.004	0.508	0.539	0.532	**0.926**	0.666	0.658	0.349
OPBG2	0.689	0.600	0.201	0.425	-0.218	0.086	0.086	0.432	0.366	-0.114	-0.140	0.628	0.583	0.615	**0.945**	0.624	0.591	0.283

Table 5.5 (Continued)

OPBG3	0.690	0.573	0.182	0.405	-0.203	0.082	0.045	0.431	0.398	-0.072	-0.182	0.571	0.581	0.657	**0.925**	0.619	0.613	0.276
OPRC1	0.461	0.458	0.401	0.270	-0.022	0.152	0.181	0.279	0.253	0.224	0.234	0.349	0.424	0.365	0.583	**0.856**	0.733	0.429
OPRC2	0.561	0.488	0.314	0.322	-0.055	0.123	0.130	0.335	0.301	0.126	-0.004	0.491	0.475	0.507	0.600	**0.805**	0.630	0.359
OPRC3	0.403	0.328	0.260	0.246	0.094	0.192	0.157	0.310	0.268	0.265	0.180	0.255	0.317	0.271	0.563	**0.856**	0.679	0.398
OPRC4	0.560	0.476	0.263	0.354	-0.018	0.162	0.179	0.421	0.322	0.143	0.003	0.483	0.497	0.463	0.656	**0.800**	0.581	0.360
OPRC5	0.263	0.146	0.217	0.179	0.146	0.204	0.058	0.197	0.131	0.262	0.130	0.165	0.212	0.175	0.375	**0.785**	0.475	0.330
OPSF1	0.446	0.421	0.368	0.256	-0.037	0.134	0.137	0.180	0.179	0.181	0.206	0.300	0.471	0.369	0.562	0.657	**0.847**	0.505
OPSF2	0.511	0.503	0.366	0.243	-0.020	0.184	0.129	0.328	0.235	0.141	0.189	0.371	0.460	0.427	0.604	0.681	**0.881**	0.485
OPSF3	0.486	0.519	0.330	0.256	-0.058	0.149	0.069	0.298	0.236	0.095	0.099	0.415	0.458	0.405	0.599	0.562	**0.824**	0.395
OPSF4	0.345	0.368	0.350	0.086	0.009	0.117	0.099	0.166	0.111	0.213	0.201	0.175	0.299	0.228	0.445	0.661	**0.779**	0.394
OPSF5	0.409	0.554	0.343	0.137	-0.107	0.098	0.213	0.287	0.184	0.026	0.175	0.369	0.319	0.300	0.489	0.526	**0.722**	0.255
OPSNF1	0.077	0.104	0.269	0.067	0.035	0.074	0.039	-0.016	0.048	0.113	0.276	-0.011	0.151	0.045	0.145	0.246	0.329	**0.721**
OPSNF2	0.256	0.233	0.358	0.218	-0.003	0.145	0.132	0.040	0.126	0.141	0.213	0.123	0.311	0.236	0.287	0.376	0.411	**0.838**
OPSNF3	0.211	0.175	0.293	0.227	-0.026	0.133	0.086	0.130	0.202	0.128	0.258	0.183	0.275	0.210	0.304	0.355	0.375	**0.747**
OPSNF4	-0.066	0.130	0.433	-0.131	0.172	0.005	0.170	-0.159	-0.099	0.195	0.378	-0.153	0.047	-0.085	-0.033	0.199	0.259	**0.691**
OPSNF5	0.345	0.403	0.464	0.186	-0.044	0.128	0.268	0.078	0.195	0.177	0.144	0.273	0.462	0.367	0.303	0.412	0.485	**0.792**
OPSNF6	0.402	0.308	0.360	0.275	-0.074	0.116	0.244	0.116	0.175	0.188	0.054	0.288	0.452	0.381	0.352	0.432	0.403	**0.763**

Note: Bold values are loadings for items which are above the recommended value of 0.5

EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance;OPSNF–Satisfaction with Nonfinancial Performance.

Table 5.6

Fornell-Larcker Criterion Analysis for Checking Discriminant Validity of First-order Constructs

	EOINN	EOPRO	EORT	HCIS	HCO	HJD	HPA	HSE	HTR	MTG	MTM	OIC	OID	OIM	OPBG	OPRC	OPSF	OPSNF
EOINN	**0.915**																	
EOPRO	0.699	**0.882**																
EORT	0.343	0.538	**0.908**															
HCIS	0.593	0.314	0.057	**0.729**														
HCO	0.097	0.100	-0.024	-0.077	**0.842**													
HJD	0.135	0.107	0.022	0.334	-0.111	**0.776**												
HPA	-0.226	-0.240	-0.249	-0.299	0.223	-0.218	**0.772**											
HSE	0.522	0.447	-0.009	0.528	-0.131	0.336	-0.200	**0.719**										
HTR	0.478	0.342	0.059	0.514	-0.008	0.194	-0.250	0.517	**0.723**									
MTG	-0.054	-0.062	0.155	0.016	-0.285	0.146	-0.135	0.026	0.082	**0.906**								
MTM	-0.195	-0.041	0.252	-0.145	-0.150	0.132	-0.229	-0.097	-0.002	0.492	**0.861**							
OIC	0.710	0.590	0.189	0.505	0.191	0.152	-0.145	0.537	0.429	-0.073	-0.158	**0.801**						
OID	0.781	0.639	0.430	0.568	0.136	0.214	-0.264	0.439	0.398	0.004	-0.095	0.716	**0.809**					
OIM	0.805	0.663	0.210	0.562	0.111	0.159	-0.193	0.533	0.511	-0.091	-0.310	0.705	0.726	**0.860**				
OPBG	0.727	0.611	0.224	0.446	0.189	0.093	-0.110	0.434	0.375	-0.077	-0.114	0.609	0.608	0.644	**0.932**			
OPRC	0.554	0.472	0.359	0.337	-0.030	0.201	-0.176	0.378	0.315	0.247	0.135	0.430	0.475	0.439	0.683	**0.821**		
OPSF	0.543	0.577	0.432	0.245	0.049	0.170	-0.156	0.309	0.234	0.166	0.214	0.400	0.499	0.429	0.667	0.763	**0.812**	
OPSNF	0.304	0.315	0.475	0.214	0.004	0.142	-0.213	0.062	0.165	0.205	0.267	0.189	0.404	0.290	0.326	0.460	0.509	**0.760**

Note: Diagonals (in bold) represent the square root of AVE while the other entries (off-diagonal) represent the correlation.

EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

Table 5.7
Fornell-Larcker Criterion Analysis for Checking Discriminant Validity of Second-order Constructs

	EO	HCIS	HCO	HJD	HPA	HSE	HTR	MT	OI	OP
EO	**0.821**									
HCIS	0.403	**0.729**								
HCO	0.098	-0.077	**0.842**							
HJD	0.080	0.334	-0.111	**0.776**						
HPA	-0.295	-0.299	0.223	-0.218	**0.772**					
HSE	0.389	0.528	-0.131	0.336	-0.200	**0.719**				
HTR	0.374	0.514	-0.008	0.194	-0.250	0.517	**0.723**			
MT	0.009	-0.064	-0.257	0.162	-0.206	-0.033	0.052	**NA**		
OI	0.731	0.602	0.183	0.182	-0.192	0.565	0.510	-0.205	**0.892**	
OP	0.677	0.366	0.053	0.189	-0.198	0.359	0.324	0.204	0.572	**NA**

Note: Diagonals (in bold) represent the square root of AVE while the other entries (off-diagonal) represent the correlation.
EO –Entrepreneurial Orientation; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MT - Managerial Ties; OI – Organizational Innovation; OP - Organizational Performance.

5.6.2 Establishing Higher-Order Constructs

One of the key reasons to establish higher-order construct is to minimize the number of relationships in the model structure (Hair, Hult et al., 2014) so that the model is parsimonious and multicollinearity due to multidimensional model structures can be avoided (Hair, Sarstedt et al., 2014; Ringle et al., 2012). In this study, entrepreneurial orientation and organizational innovation were conceptualized as second-order constructs with reflective indicators. The second-order constructs were assessed using the repeated indicator approach in which all the first-order constructs were taken together as a reflective measure of second-order constructs. That is, the second-order

constructs were measured directly by all indicators of the first-order constructs (Becker, Klein, & Wetzels, 2012; Chin, Marcolin, & Newsted, 2003; Wetzels, Odekerken-Schroder, & van Oppen, 2009). A similar number of indicators of each construct in the first-order model were reused to make a better operationalization of the model (Chin et al., 2003).

In this study, entrepreneurial orientation (EO) was conceptualized as a second-order constructs which consisted of three first-order constructs. Such treatment was similar to that given by previous researchers (Hakala & Kohtamaki, 2011; Y. Li, Huang, & Tsai, 2009; Moreno & Casillas, 2008; Stam & Elfring, 2006, 2008). Table 5.4 illustrates that all first-order constructs for EO, namely, innovativeness, proactiveness and risk taking with reflective indicators were modeled to the second-order constructs with the three of first-order constructs as reflective indicators. This model is called reflective-reflective type 1 (Becker et al., 2012). As shown in Table 5.6, the high correlations between all three dimensions of EO in the first-order construct denoted the existence of a second-order construct (Byrne, 2001, 2013). Moreover, these three first-order constructs were explained well by the second-order of EO, as indicated by *R* squares of 0.692, 0.811 and 0.518 (see Table 5.8). All path coefficients from EO to its dimensions were significant at $p < 0.01$ (see Table 5.8). Accordingly, all three dimensions of EO were measured to a second-order construct procedure (Wetzels et al., 2009).

Furthermore, following Alegre and Chiva (2008), Wang and Ahmed (2004) Jimenez-Jimenez and Sanz-Valle (2008) and Jimenez-Jimenez, Sanz-Valle, and Hernandez-Espallardo (2008), this study also conceptualized organizational innovation (OI) as a second-order reflective construct with three first-order reflective constructs. They were process innovation, product innovation, and managerial innovation. Table 5.4 illustrates that all first-order constructs for OI with reflective indicators were modeled to the second-order constructs with the three of first-order constructs as reflective indicators. Moreover, Table 5.6 demonstrates that correlations between all three dimensions of OI were high in the first-order constructs, which indicated the presence of a second-order construct (Byrne, 2001, 2013). The three first-order constructs were also explained well by the second-order of OI, as indicated by *R* square values of 0.779, 0.756 and 0.853 (see Table 5.8). All path coefficients from EO to its dimensions were significant at $p < 0.01$ (see Table 5.8). Accordingly, all three dimensions of OI were measured to a second-order construct procedure (Wetzels et al., 2009). The validity of EO and OI as second-order constructs is shown in Table 5.4, which indicates that the AVE and CR of EO were 0.674 and 0.860 and OI were 0.796 and 0.921, respectively. All values were well above the cutoff values.

Unlike EO and OI, managerial ties (MT) and organizational performance (OP) were conceptualized as second-order formative constructs with first-order reflective constructs. Such model is called reflective-formative type II model (Becker et al., 2012; Chin, 2010). Following Li et al. (2008), this study conceptualized MT as a second-order

formative construct with two first-order reflective constructs, namely, ties with other managers and ties with government. Table 5.4 illustrates that the two first-order constructs for MT with reflective indicators were modeled to the second-order constructs with the two of first-order constructs as formative constructs. All path coefficients from the dimensions of MT to MT were significant at $p < 0.01$ (see Table 5.8). Accordingly, all two dimensions of MT were measured to a second-order construct procedure (Wetzels et al., 2009). The weight values recorded for MT as a second order construct were 0.621 (MTG) and 0.535 (MTG) and were significant at $p < 0.01$. Moreover, the value of VIF for the two constructs were less than 5, as shown in Table 5.4. These values were below the suggested threshold. Results demonstrated the goodness of measure for second-order formative construct.

OP was also conceptualized as a second-order formative construct with four first-order reflective constructs. They were business growth (OPBG), performance relative to competitors (OPRC), satisfaction with financial performance (OPSF), and satisfaction with nonfinancial performance (OPSNF) (Ahmad et al., 2010; Ahmad et al., 2011; Gholami et al., 2013; Rai, Patnayakuni, & Seth, 2006). Table 5.4 illustrates that all first-order constructs for OP with reflective indicators were modeled to the second-order constructs with the four of first-order constructs as formative constructs. All path coefficients from the dimension of OP to OP were significant at $p < 0.01$ (see Table 5.8). Therefore, the second order constructs of OP was directly measured by all indicators of first-order constructs (Wetzels et al., 2009). The weight values recorded for OP as a

second order construct were 0.239 (OPBG), 0.349 (OPRC), 0.346 (OPSF) and 0.268 (OPSNF) and were significant at $p < 0.01$. Moreover, the values of VIF for the four constructs of OP were less than 5, as shown in Table 5.4. These values were below suggested threshold. Results demonstrated the goodness of measure for second-order formative construct.

Table 5.8
Second-order of EO, OI, MT and OP Construct and Its Relationship with First-order Constructs

Second Order Construct	First Order Construct	R^2	Beta	t-value
Entrepreneurial Orientation(EO)	Innovativeness	0.692	0.832	P<0.01
	Proactiveness	0.811	0.900	P<0.01
	Risk Taking	0.518	0.720	P<0.01
Organizational Innovation (OI)	Process Innovation	0.779	0.883	P<0.01
	Product Innovation	0.756	0.869	P<0.01
	Managerial Innovation	0.853	0.924	P<0.01
		R^2	**Weight**	**t-value**
Managerial Ties (MT)		1.000	-	-
	Ties with government	-	0.621	P<0.01
	Ties with managers	-	0.535	P<0.01
Organizational Performance (OP)		1.000	-	-
	Business Growth	-	0.239	P<0.01
	Relative to Competitor	-	0.349	P<0.01
	Satisfaction Financial	-	0.346	P<0.01
	Satisfaction Nonfinancial	-	0.268	P<0.01

5.7 Assessment of Structural Model

Once the goodness of the measurement model had been established, the next step was to test the hypotheses. By running PLS-SEM algorithm and bootstrapping, the assessment of the structural model was performed (Chin, 2010). First, the predictive power of the structural model was evaluated by the coefficient of determination (R^2 values) of the endogenous construct (Chin, 2010; Henseler et al., 2009) and the level and significance of the path coefficient was determined (Hair, Hult et al., 2014). Table 5.9 illustrates R^2 of each endogenous latent variables of this study.

Table 5.9
R-square of Endogenous Latent Constructs

Construct	*R* Square	Result
Organizational Innovation	0.719	Substantial
Organizational Performance	0.498	Substantial

According to Cohen (1992; 2013), as a rule of thumb, R^2 values of 0.26, 0.13, or 0.02 for endogenous latent constructs can be described as substantial, moderate and weak respectively. Table 5.9 indicates that exogenous constructs such as EO, communication and information sharing, compensation, job design, performance appraisal, selection and training and development contributed 71.9% of the variance in organizational innovation. Furthermore, R^2 of organizational performance was substantial with a value of 0.498. This means that organizational innovation explained 49.8% of the variance in organizational performance. According to Henseler et al. (2009), the R^2 of endogenous

variables with three or more exogenous latent variables should be at least substantial, which was met in this study.

Second, the predictor constructs can be assessed by using the effect size of Cohen (f^2) (Cohen, 2013). Because organizational innovation construct had more than one exogenous construct, the relative effect sizes (f^2) of the exogenous constructs were calculated using the equation $f^2 = (R^2 \text{ included} - R^2 \text{ excluded})/(1 - R^2 \text{ included})$. R^2 *included* and R^2 *excluded* were R^2 value of the endogenous constructs when the exogenous constructs is used or removed from the model respectively. According to Cohen (2013), f^2 values of 0.35, 0.15, and 0.02 are considered large, medium, and small, respectively. Table 5.10 shows that f^2 of EO, communication and information sharing, compensation, performance appraisal, selection and training and development had relatively small to moderate effect sizes (Cohen, 2013). This range of effect sizes was reasonable since there were many factors that affect organizational innovation (Luk et al., 2008). This means that the estimated model fitted the data very well.

Table 5.10
Effect Sizes of Exogenous Latent Constructs

Construct	R^2 included	R^2 excluded	f^2
Entrepreneurial Orientation	0.719	0.537	0.65
Communication and Information Sharing	0.719	0.675	0.16
Compensation	0.719	0.694	0.09
Job design	0.719	0.719	0.00
Performance Appraisal	0.719	0.715	0.01
Selection	0.719	0.692	0.10
Training	0.719	0.714	0.02

Third, even though the sample size for this study was 321, which was above the minimum sample size of 100, as specified by '10 times' rule of thumb, a statistical analysis of power was run to accurately determine sufficient sample size. In addition, because this study was likely to produce relatively small to moderate effect sizes, the power analysis was mostly required (Peng & Lai, 2012). The power of the research was tested by using post hoc power analysis of the G*Power program version 3, to check whether the commonly used of 0.80 statistical power was fulfilled (Peng & Lai, 2012). The power analysis was undertaken for every path structure and the largest structural equation (LSE), which was the dependent latent variable (LV) with the largest number of independent LVs affecting it. In this research model, the LSE was the latent construct of organizational innovation with seven predictors (i.e. EO, communication and information sharing, compensation, job design, performance appraisal, selection and training). To the second smallest effect size (f^2) of 0.09 (see Table 5.10), it was statistically shown that a sample size of 321 in this study was able to achieve the power

of 0.98, which was significant at the 0.05 (see Appendix F). As such, the power of this research was adequate, as the power was more than 0.80 (Hair, Hult et al., 2014; Peng & Lai, 2012.

Next the hypotheses were examined via the bootstrapping procedure. Results of the hypothesis testing are presented in Table 5.11.

5.7.1 Direct Relationship – The Two Stage Approach

According to Hair et al. (2013), the paths that are non-significant or showing signs the opposite direction to the hypothesized do not support prior hypotheses, while significant paths empirically support the proposed causal relationship. Before the mediating effect was tested, bootstrapping with a resample of 500 was run to get the t-value in order to assess if the direct relationships were significant. The path coefficients were produced as shown in Figure 5.3. Figure 5.4 and Table 5.11 show the bootstrapping results. Detailed results are as follows:

Hypothesis 1: Entrepreneurial orientation is positively related to organizational innovation.

Result from the output of the algorithm and bootstrapping PLS-SEM showed a positive and significant association between entrepreneurial orientation and organizational innovation ($\beta = 0.508$, $t = 14.073$, $p < 0.01$). Therefore, Hypothesis 1 is supported.

Hypothesis 2: Communication and information sharing is positively related to organizational innovation.

The second hypothesis was also confirmed as a positive and significant association between the practice of communication and information sharing and organizational innovation ($\beta = 0.273$, $t = 6.577$, $p < 0.01$).

Hypothesis 3: Compensation is positively related to organizational innovation.

A significant and positive relationship between the practice of compensation and organizational innovation was found ($\beta = 0.167$, $t = 4.760$, $p < 0.01$). Hence, Hypothesis 3 is supported.

Hypothesis 4: Job design is positively related to organizational innovation.

As the t-value 0.155 was lower than the cutoff value of 1.645, statistically insignificant relationship was found between the practice of job design and organizational innovation ($\beta = -0.006$, $t = 0.155$, $p < 0.01$). Based on the result, Hypothesis 4 failed to receive empirical support and was rejected. Hence no conclusion can be drawn (Lane, 2011; Rainey, 2012). Since all the appropriate steps in the methodology that relate to sampling and measurement error had been taken into account, and the power of analysis (G*power) exceeded 0.80, the insignificant relationship can be considered not related to the methodological issues.

Hypothesis 5: Performance appraisal is positively related to organizational innovation.

Performance appraisal practice was significantly and positively related to organizational innovation ($\beta = 0.065$, $t = 2.015$, $p < 0.05$), indicating support for Hypothesis 5.

Hypothesis 6: Selection is positively related to organizational innovation.

A positive and significant association between the practice of selection and organizational innovation was found ($\beta = 0.215$, $t = 4.903$, $p < 0.01$), supporting Hypothesis 6.

Hypothesis 7: Training is positively related to organizational innovation.

The result showed that this hypothesis was supported as the path coefficient from training to organizational innovation was positive and significant ($\beta = 0.087$, $t = 2.533$, $p < 0.01$).

Hypothesis 8: Organizational innovation is positively related to organizational performance.

Since the path coefficient from organizational innovation to organizational performance was positive and significant ($\beta = 0.720$, $t = 27.032$, $p < 0.01$), Hypothesis 8 received empirical support.

Table 5.11
Results of Direct Relationship

Hypotheses	Relationship	Beta	SE	t-value	Decision
H1	EO -> OI	0.508	0.036	14.073**	Supported
H2	HCIS -> OI	0.273	0.043	6.577**	Supported
H3	HCO -> OI	0.167	0.037	4.760**	Supported
H4	HJD -> OI	-0.006	0.039	0.155	Not Supported
H5	HPA -> OI	0.065	0.036	2.015*	Supported
H6	HSE -> OI	0.215	0.041	4.903**	Supported
H7	HTR -> OI	0.087	0.036	2.533**	Supported
H8	OI -> OP	0.720	0.028	27.032**	Supported

Note: *p < 0.05 (t >1.645); **p < 0.01 (t > 2.33)
EO – Entrepreneurial Orientation; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; OI –Organizational Innovation; OP – Organizational Performance; SE – Standard Error; LL – Lower Limit; UL – Upper Limit

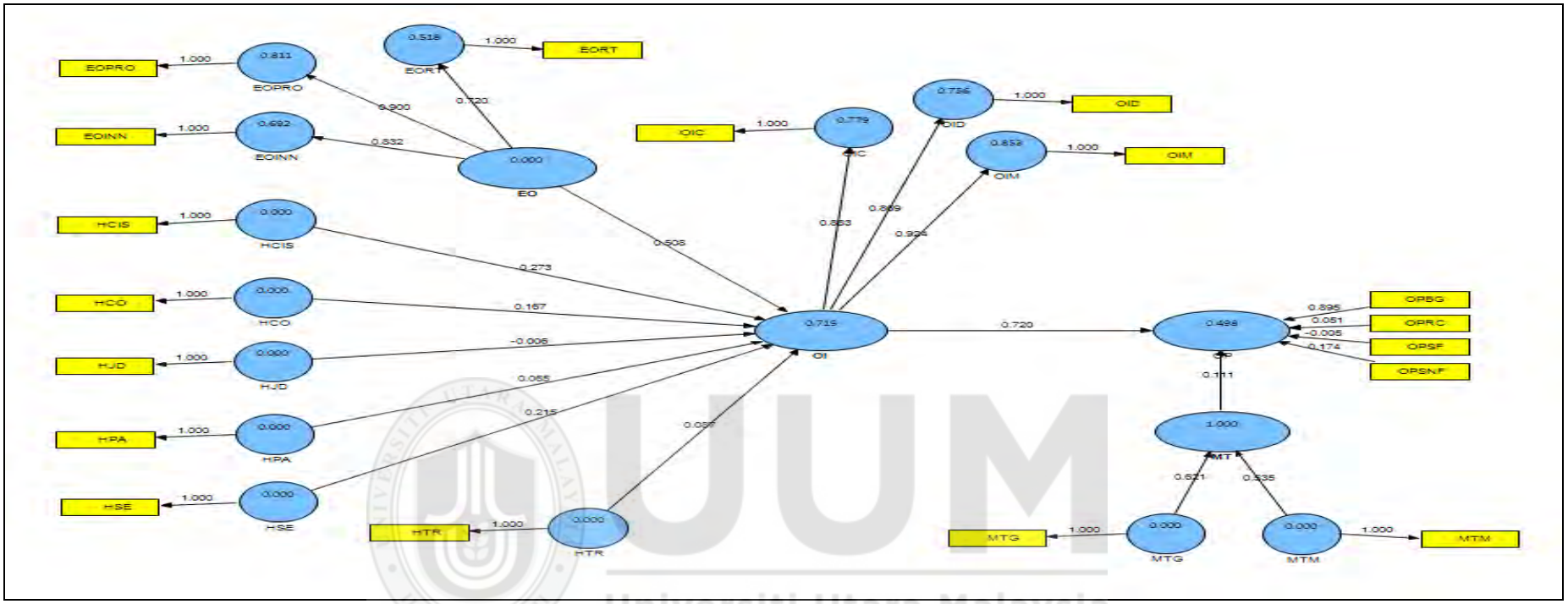

Figure 5.3

Two-Stage Approach: Direct Path Coefficient of the Structural Model (PLS Algorithm)

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

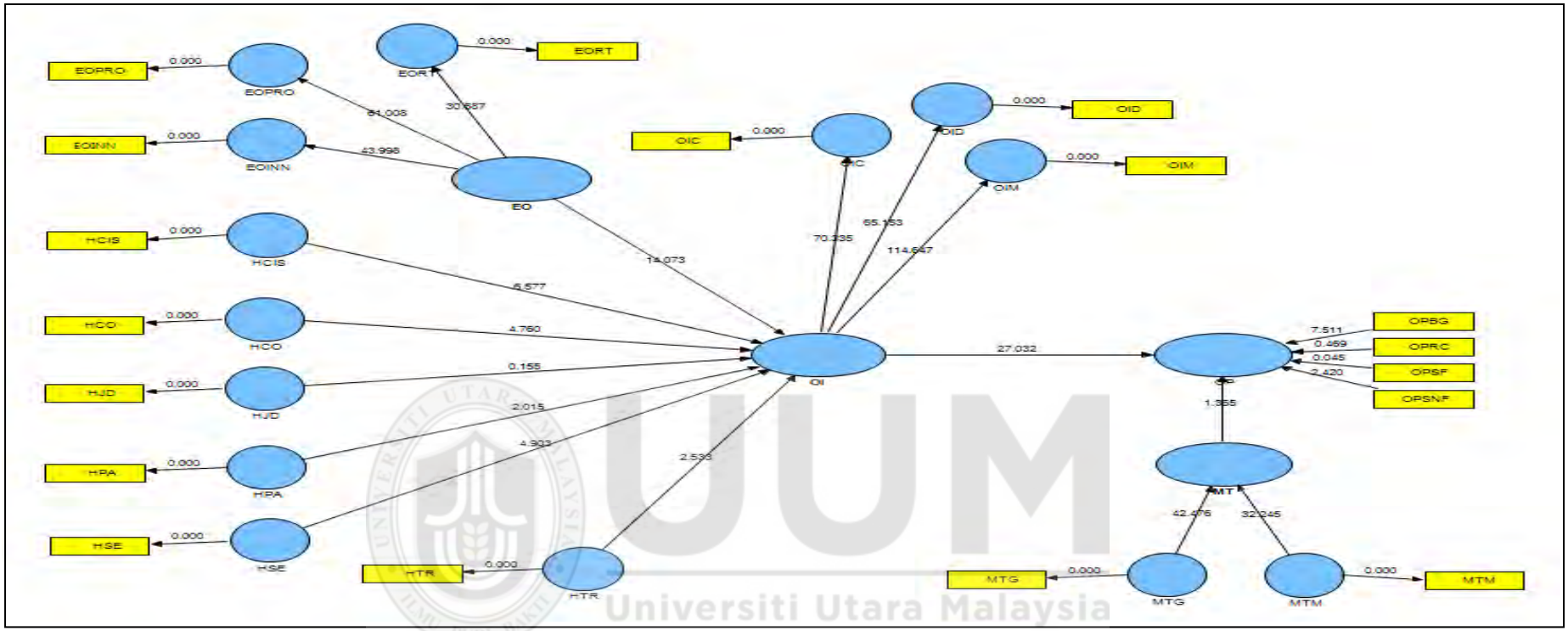

Figure 5.4

Two-Stage Approach: Direct Path Coefficient of the Structural Model (Bootstrapping)

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

5.7.2 Testing the Mediating Effect of Organizational Innovation

Table 5.12 shows that all relationships were significant except the job design-OI relationship. Once the relationships were tested, the test of the mediation effect was performed. According to Hayes (2009), there are several steps in assessing this relationship. First, a researcher needs to fit a model through SEM to estimate the relationship between the predictor and the mediator variables – path "*a*" and the relationship between the mediator and the criterion variables – path "*b*" to determine mediation. To do this, bootstrapping was performed. After 500 bootstrapped direct effects were produced, i.e. path "*a*" and path "*b*" were assessed. Second, the *t*-test via bootstrapping procedure needs to be computed to test the mediation effect (bootstrap-T). Third, Standard Errors (SE) for all indirect effects was calculated. Based on Table 5.12, it was concluded that all six indirect effects were significant at the 0.05 level.

Table 5.12
t-value calculation

Path (a1 to a7)	Path b		**Indirect Effect**	**SE**	***t-value***
0.508	0.72	a1*b	0.366	0.032	11.439**
0.273	0.72	a2*b	0.196	0.031	6.336**
0.167	0.72	a3*b	0.120	0.025	4.818**
-0.006	0.72	a4*b	-0.004	0.029	-0.152
0.065	0.72	a5*b	0.047	0.023	2.029*
0.215	0.72	a6*b	0.155	0.031	4.987**
0.087	0.72	a7*b	0.063	0.025	2.510*

Note:*p < 0.05 (t > 1.96); **p < 0.01 (t > 2.58)

Further, to confirm the mediation effect of this study, 95% bootstrapped confidence interval (95% Boot CI) was calculated. Table 5.13 exhibits bootstrapping confidence interval calculation.

Table 5.13
Bootstrapping Confidence Interval Calculation

			Bootstrapped Confidence Interval (Boot CI)	
	Indirect Effect	**SE**	**95% LL**	**95% UL**
a1*b	0.366	0.032	0.303	0.429
a2*b	0.196	0.031	0.136	0.257
a3*b	0.120	0.025	0.071	0.169
a4*b	-0.004	0.029	-0.061	0.052
a5*b	0.047	0.023	0.002	0.092
a6*b	0.155	0.031	0.094	0.215
a7*b	0.063	0.025	0.014	0.112

Note: SE – Standard Error; LL – Lower Limit; UL – Upper Limit

Table 5.14 shows that, of seven hypotheses proposed, only six hypotheses met the requirement to establish the effect of mediation because of their significant indirect effects. Further, in line with the non-parametric approach to PLS path modeling, a nonparametric bootstrapping procedure was administered to test the significance of the mediating effect, as proposed by Henseler et al. (2009) to the hypotheses.

Table 5.14
Summary of Mediation Results

					Bootstrapped Confidence Interval (Boot CI)		
Hypotheses	**Relationship**	**Beta**	**SE**	***t-value***	**95% LL**	**95% UL**	**Decision**
H9	EO->OI->OP	0.366	0.032	11.439**	0.303	0.429	Supported
H10	HCIS->OI->OP	0.196	0.031	6.336**	0.136	0.257	Supported
H11	HCO->OI->OP	0.120	0.025	4.818**	0.071	0.169	Supported
H12	HJD->OI->OP	-0.004	0.029	-0.152	-0.061	0.052	Not Supported
H13	HPA->OI->OP	0.047	0.023	2.029*	0.002	0.092	Supported
H14	HSE->OI->OP	0.155	0.031	4.987**	0.094	0.215	Supported
H15	HTR->OI->OP	0.063	0.025	2.510*	0.014	0.112	Supported

Note:*p < 0.05 (t > 1.96); **p < 0.01 (t > 2.58)
EO – Entrepreneurial Orientation; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; OI –Organizational Innovation; OP – Organizational Performance; SE – Standard Error; LL – Lower Limit; UL – Upper Limit

Hypothesis 9: Organizational innovation mediates the relationship between entrepreneurial orientation and organizational performance.

As shown in Table 5.14 and Figure 5.5, the bootstrapping analysis showed that the indirect effect (β = 0.366) was significant with t-value of 11.439. Also as indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.303, UL = 0.429], did not straddle a 0 in between, indicating there is mediation. Thus, the result revealed that the mediation effect of organizational innovation on the relationship between entrepreneurial orientation and organizational performance was statistically significant (β = 0.366, t =11.439, p < 0.01). For that reason, Hypothesis 9 was supported.

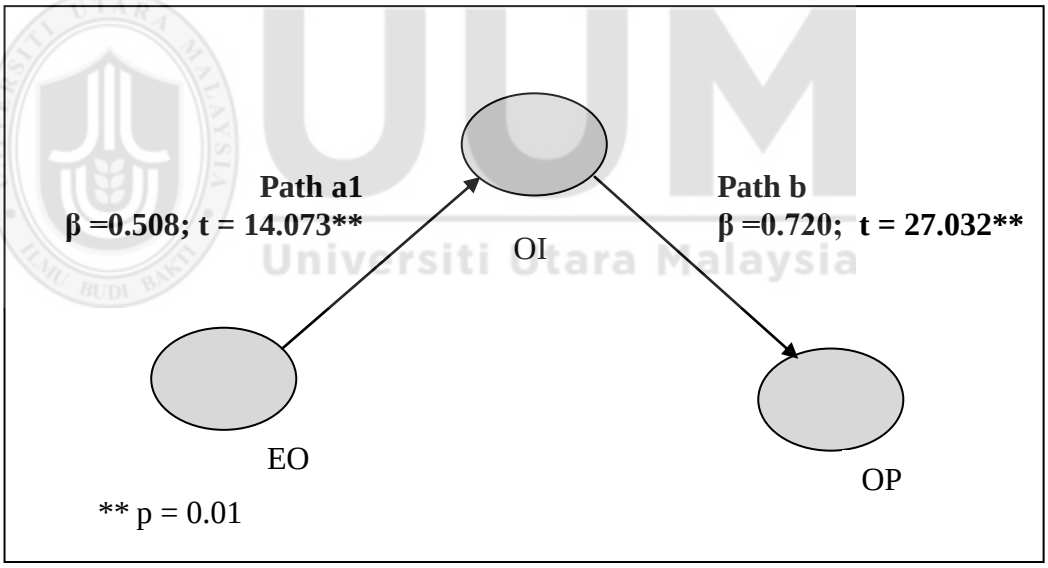

Figure 5.5
Analysis Outcome of H9

Hypothesis 10: Organizational innovation mediates the relationship between communication and information sharing and organizational performance.

As shown in Table 5.14 and Figure 5.6, the bootstrapping analysis indicated that the indirect effect (β = 0.196) was significant with t-value of 6.336. In addition, as indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.136, UL = 0.257], did not straddle a 0 in between, indicating mediation. Therefore, the result demonstrated that the mediation effect of organizational innovation on the relationship between communication and information sharing and organizational performance was significant (β = 0.196, t = 6.336, p < 0.01). Consequently, the result supported H10.

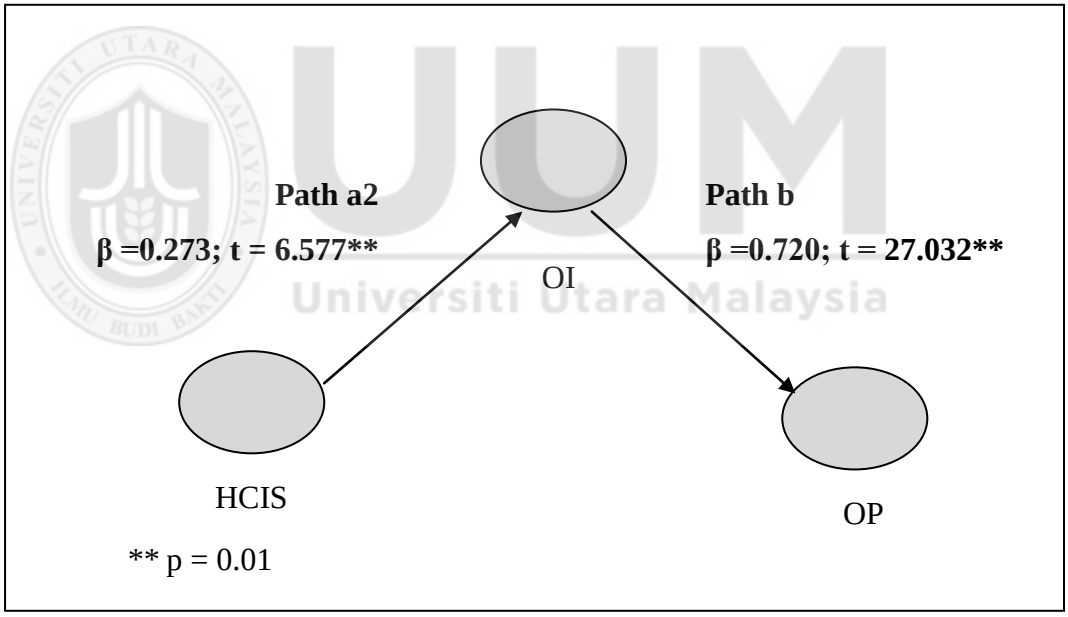

Figure 5.6
Analysis Outcome of H10

Hypothesis 11: Organizational innovation mediates the relationship between compensation and organizational performance.

As shown in Table 5.14 and Figure 5.7, the bootstrapping analysis indicated that the indirect effect (β = 0.120) was significant with t-value of 4.818. As indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.071, UL = 0.169] did not straddle a 0 in between, indicating mediation. Hence, the result revealed a significant mediating effect of organizational innovation on the relationship between compensation and organizational performance (β = 0.120, t = 4.818, p < 0.01). Thus, Hypothesis 11 was supported.

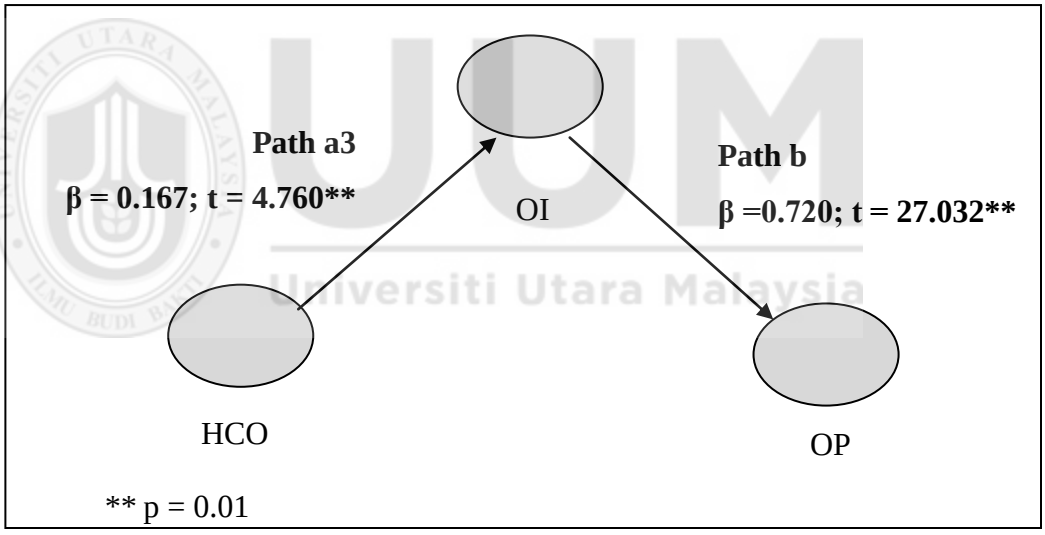

Figure 5.7
Analysis Outcome of H11

Hypothesis 12: Organizational innovation mediates the relationship between job design and organizational performance.

Hypothesis 12 showed that the t-value -0.152 was lower than the cutoff value of 1.96, indicating insignificant result. The result implies that there was no credible evidence of the mediation effect of organizational innovation on the relationship between the practice of job design and organizational performance (β = -0.006, t = -0.152, p < 0.05), as shown in Table 5.14 and Figure 5.8. As indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = -0.061, UL = 0.052] did straddle a 0 in between, indicating no mediation. Therefore, H12 was rejected and no conclusion can be drawn (Lane, 2011; Rainey, 2012). Since all the appropriate steps in the methodology that relate to sampling and measurement error had been taken into account, and the power of analysis (G*power) exceeded 0.80, the insignificant relationship can be considered not related to the methodological issues.

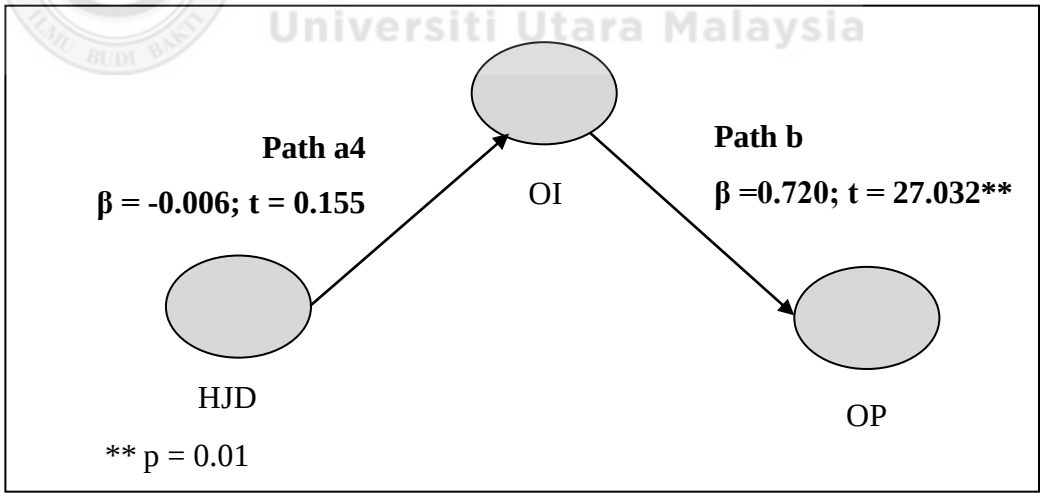

Figure 5.8
Analysis Outcome of H12

Hypothesis 13: Organizational innovation mediates the relationship between performance appraisal and organizational performance.

As shown in Table 5.14 and Figure 5.9, the bootstrapping analysis indicated that the indirect effect (β = 0.047) was significant with t-value of 2.029. As indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.002, UL = 0.092] did not straddle a 0 in between, indicating mediation. Hence, the result revealed a significant mediating effect of organizational innovation on the relationship between compensation and organizational performance (β = 0.047 t = 2.029, p < 0.05). Thus, Hypothesis 13 was supported.

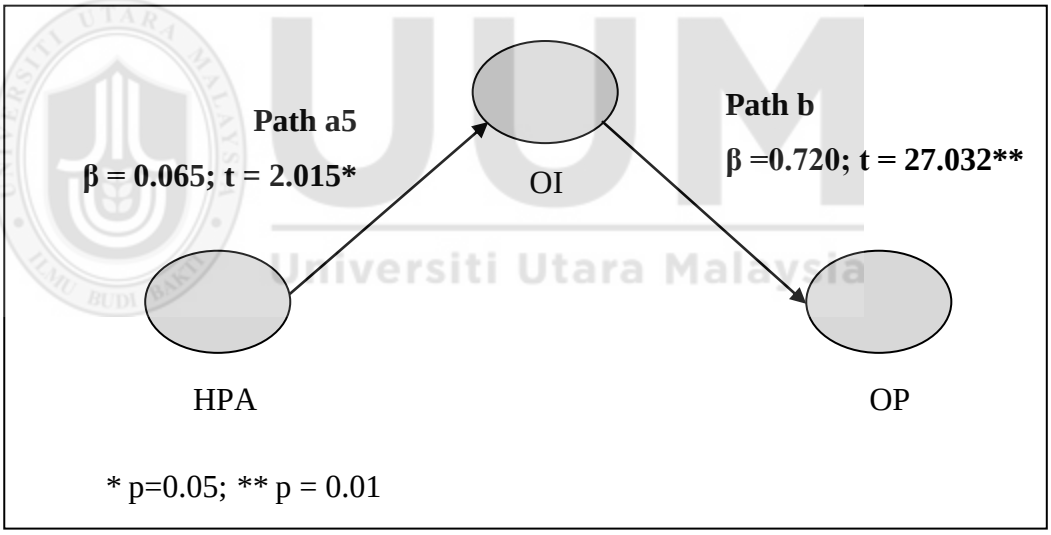

Figure 5.9
Analysis Outcome of H13

Hypothesis 14: Organizational innovation mediates the relationship between selection and organizational performance.

The bootstrapping analysis showed that the indirect effect (β = 0.155) was significant with t-value of 4.987. Also as indicated by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.094, UL = 0.215] did not straddle a 0 in between, indicating mediation. Therefore, the result revealed that the mediation effect of organizational innovation on the relationship between the practice of selection and organizational performance was significant (β = 0.155, t = 4.987, p < 0.01), as shown in Table 5.14 and Figure 5.10. H14 was thus supported.

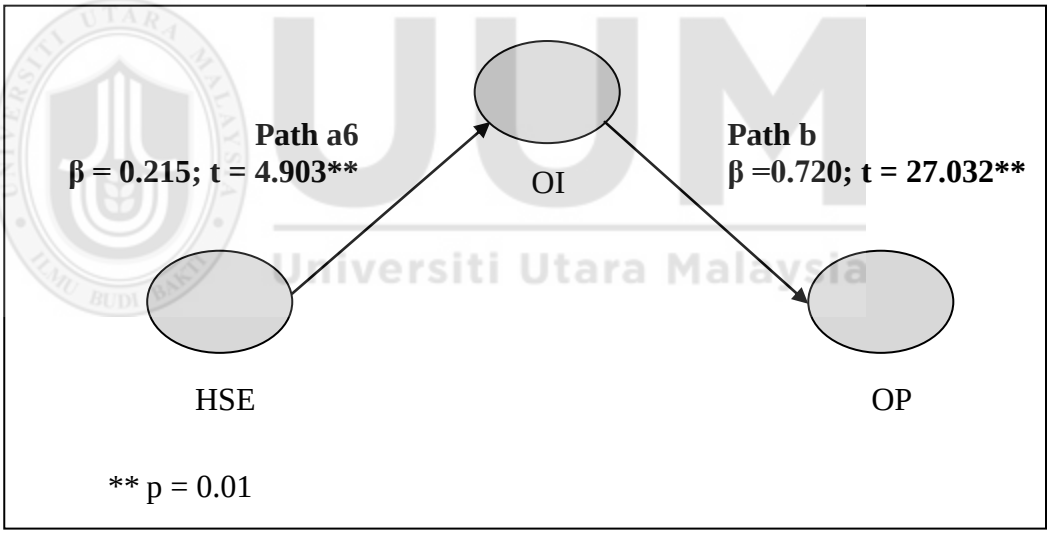

Figure 5.10
Analysis Outcome of H14

Hypothesis 15: Organizational innovation mediates the relationship between training and organizational performance.

Finally, the bootstrapping analysis showed that the indirect effect (β = 0.063) was significant with t-value of 2.510. As by Preacher and Hayes (2008), the indirect effect 95% Boot CI: [LL = 0.014, UL = 0.112] did not straddle a 0 in between, indicating there was a mediation. Consequently the result demonstrated that the mediation effect of organizational innovation in the relationship between the practice of training and organizational performance was statistically significant (β = 0.063, t = 2.510 p < 0.05), as shown in Table 5.14 and Figure 5.11. H15 was therefore supported.

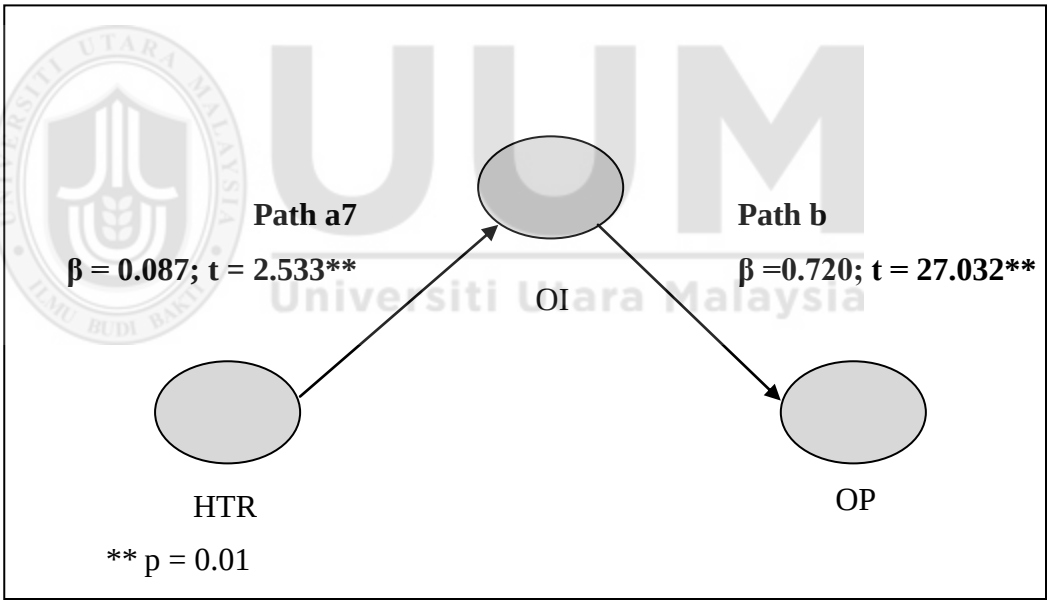

Figure 5.11
Analysis Outcome of H15

5.7.3 Testing Moderating Effect – The Two Stage Approach

Hypotheses 16: Extensive utilization of managerial ties moderates the relationship between organizational innovation and organizational performance.

As discussed earlier, this study employed the two-stage approach to examining the moderating effect of managerial ties on the relationship between organizational innovation and organizational performance. Figure 5.12 and Figure 5.13 illustrate the moderating effect test for the model. In Table 5.15 and Figure 5.13, Hypothesis 16 showed that the t-value 0.425 was lower than the cutoff value of 1.645, indicating that the result was not statistically significant. Thus, the result showed no credible evidence of the moderating effect of managerial ties on the relationship between organizational innovation and organizational performance ($\beta = -0.021$, $t = 0.425$, $p < 0.05$). Hence, H16 was rejected and no conclusion can be drawn (Lane, 2011; Rainey, 2012). Since all the appropriate steps in the methodology that relate to sampling and measurement error had been taken into account, and the power of analysis (G*power) exceeded 0.80, the insignificant relationship can be considered not related to the methodological issues.

Table 5.15
Summary of Result for Moderating Effect

H	Relationship	Beta	SE	T Statistics	Decision
H16	OI * MT -> OP	-0.021	0.049	0.425	Not Supported

Note: *$p < 0.05$ ($t = 1.645$)

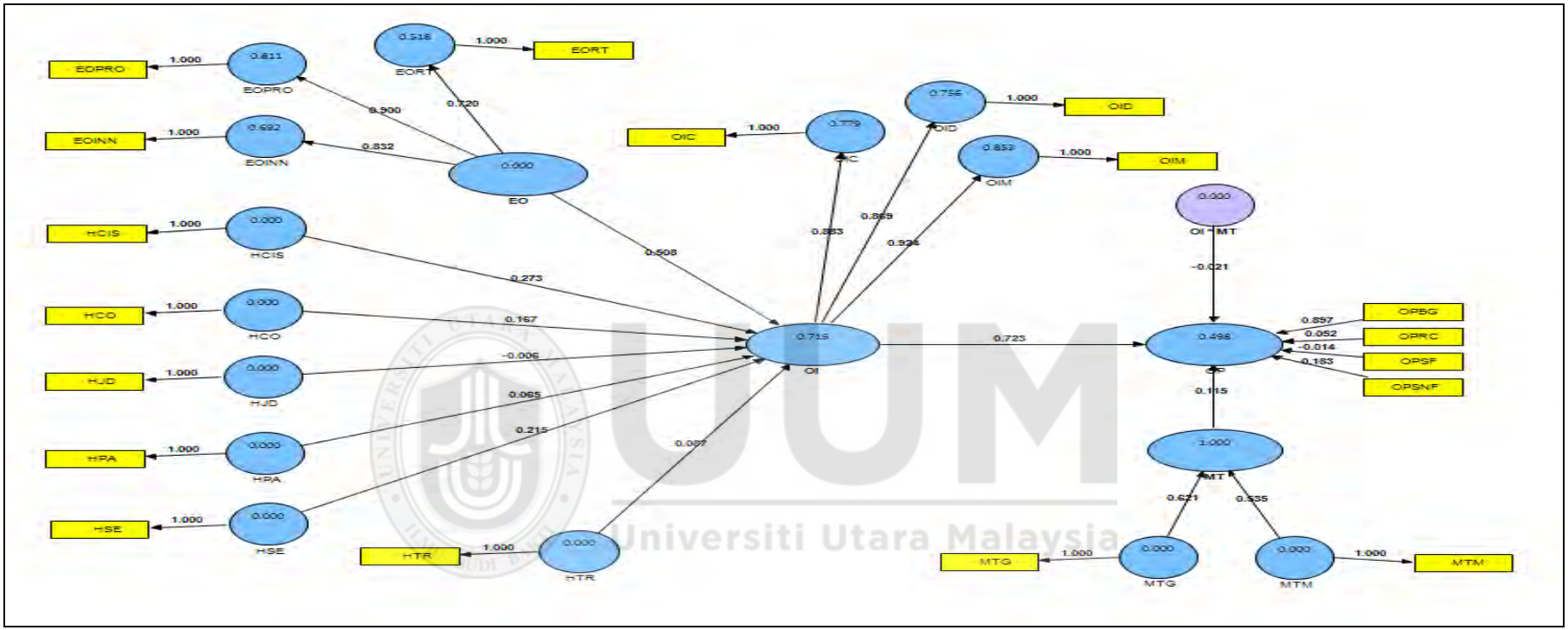

Figure 5.12

Two-stage Approach: Moderating Effects Model (PLS Algorithm)

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

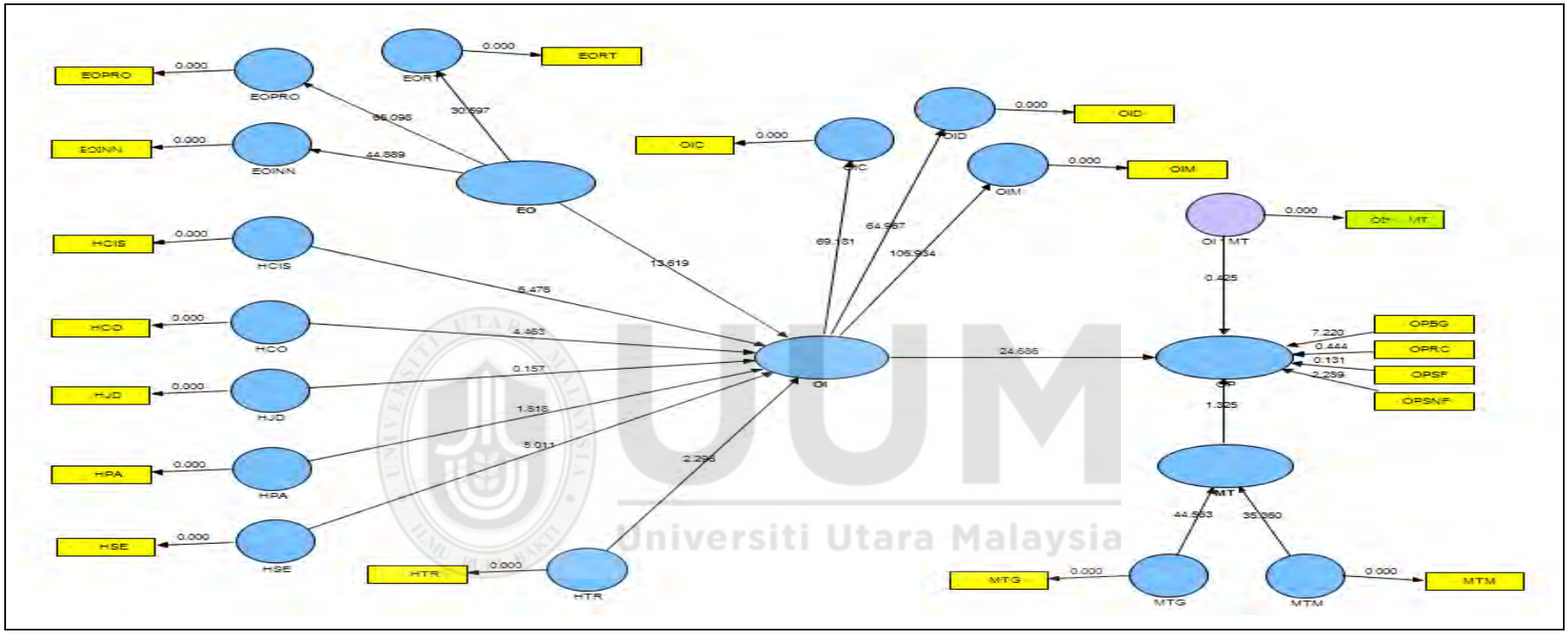

Figure 5.13

Two-Stage Approach: Moderating Effects Model (Bootstrapping)

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

5.8 Analysing Predictive Relevance (Q2)

To evaluate the criterion of predictive accuracy, the Stone-Geisser's Q^2 value was utilized (Geisser, 1974 & Stone, 1974 cited in Hair, Hult et al., 2014). The blindfolding procedure was performed to obtain the value of Q^2. Generally, there are two different approaches to calculate Q^2. They are the cross-validated redundancy and cross-validated communality. The cross-validated redundancy approach develops the path model estimate of both the structural model (scores of the predictors constructs) and the measurement model (target endogenous construct) of data prediction. Alternatively, the cross-validated communality approach presents only the construct scores estimated for the target endogenous construct (excluding the information about structural model) to anticipate the eliminated data points. As recommended by Hair, Hult et al. (2014), this study employed the cross-validated redundancy to measure Q^2 as it comprises the main component of the path model, i.e. the structural model, to predict omitted data points. Table 5.16 and Figure 5.14 show the summary of the predictive relevance of the model in this study.

Table 5.16
Summary of the Predictive Relevance of the Endogenous Latent Constructs (Q^2)

Constructs	Q^2	R^2	Results of Predictive Relevance
Organizational Innovation	0.473	0.719	Yes
Organizational Performance	0.453	0.498	Yes

Note: Omission distance 7

Table 5.16 shows that the values of cross-validated redundancy of the endogenous latent constructs were found to be more than zero for organizational innovation and organizational performance, i.e. 0.473 and 0.453, respectively. This means that the model had sufficient predictive relevance.

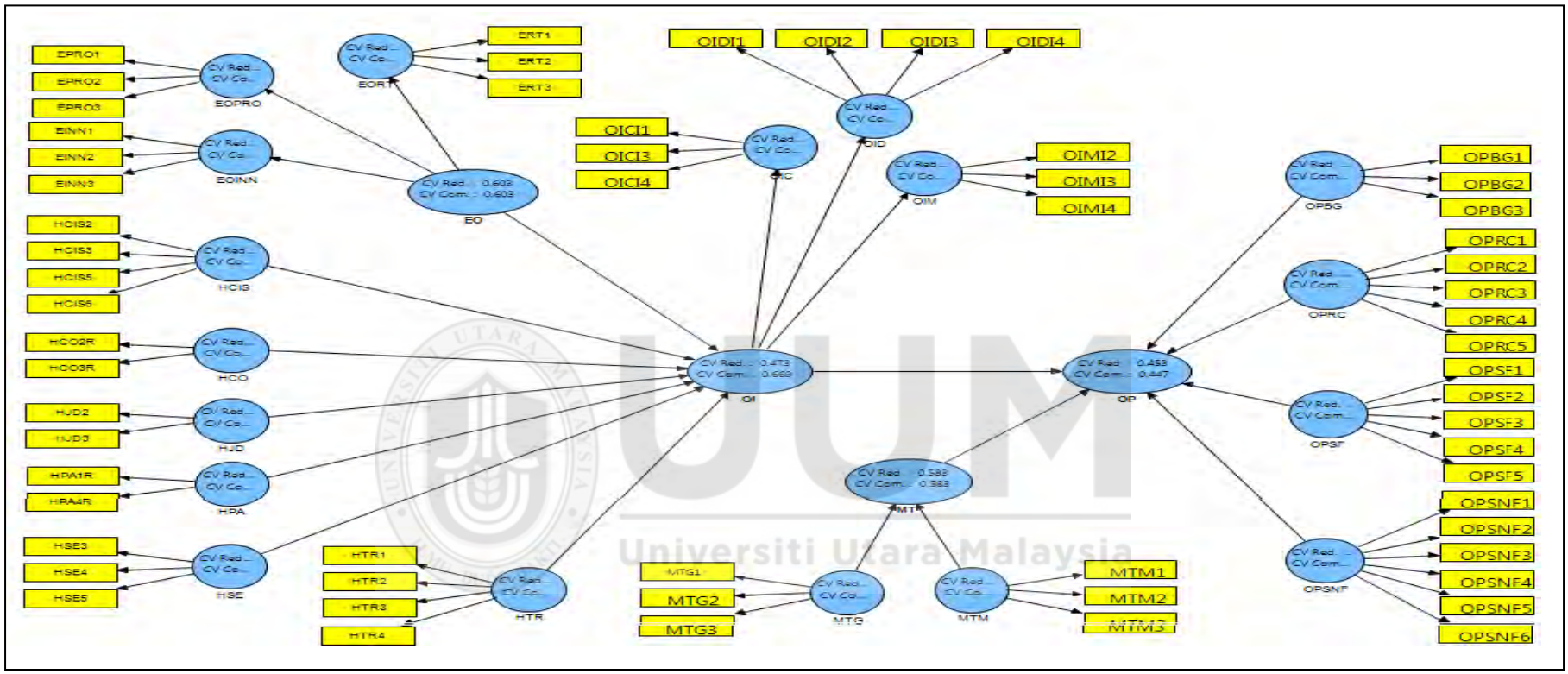

Figure 5.14

The Predictive Relevance of the Endogenous Latent Constructs (Q^2)

Note: EO – Entrepreneurial Orientation; EOINN – Innovativeness; EOPRO - Proactiveness; EORT - Risk Taking; HCIS - Communication & Information Sharing; HCO – Compensation; HJD - Job Design; HPA - Performance Appraisal; HSE - Selection; HTR – Training; MTG - Managerial Ties with Government; MTM - Managerial Ties with Managers; OI –Organizational Innovation; OIC – Process Innovation; OID – Product innovation; OIM – Managerial Innovation; OP – Organizational Performance; OPBG - Business Growth; OPRC - Performance Relative to Competitor; OPSF – Satisfaction with Financial Performance; OPSNF–Satisfaction with Nonfinancial Performance.

5.9 Summary of the Findings

Table 5.17 summarizes the research findings. As shown, of 16 hypotheses, only three failed to receive empirical support.

Table 5.17
Summary of Hypotheses Results

H	Descriptions	Results
	Results of Direct Relationship	
H1	Entrepreneurial orientation is positively related to organizational innovation.	Supported
H2	Communication and information sharing is positively related to organizational innovation.	Supported
H3	Compensation is positively related to organizational innovation.	Supported
H4	Job design is positively related to organizational innovation.	Not Supported
H5	Performance appraisal is positively related to organizational innovation.	Supported
H6	Selection is positively related to organizational innovation.	Supported
H7	Training is positively related to organizational innovation.	Supported
H8	Organizational innovation is positively related to organizational performance.	Supported
	Results of Mediation Effect	
H9	Organizational innovation mediates the relationship between entrepreneurial orientation and organizational performance.	Supported
H10	Organizational innovation mediates the relationship between communication and information sharing and organizational performance.	Supported
H11	Organizational innovation mediates the relationship between compensation and organizational performance.	Supported
H12	Organizational innovation mediates the relationship between job design and organizational performance.	Not Supported
H13	Organizational innovation mediates the relationship between performance appraisal and organizational performance.	Supported

Table 5.17 (Continued)

H14	Organizational innovation mediates the relationship between selection and organizational performance.	Supported
H15	Organizational innovation mediates the relationship between training and organizational performance.	Supported
	Results of Moderation Effect	
H16	Extensive utilization of managerial ties moderates the relationship between organizational innovation and organizational performance.	Not Supported

5.10 Summary of Chapter

This chapter reported the findings of the study. SPSS was used to describe the respondents' profile. However, PLS-SEM analysis was employed to test reliability and validity of the measures. The technique of bootstrapping in PLS-SEM analysis was used to test the research hypotheses. In general, the result indicated that the measurement model was deemed acceptable based on sufficient evidence of reliability, convergent validity and discriminant validity. After the measurement model was assessed, and the structural model was tested. The following chapter discusses the findings, accompanied by implications to practice and future research, and limitations. Some concluding remarks end the thesis.

CHAPTER SIX

DISCUSSION AND CONCLUSION

6.1 Introduction

This chapter reviews and discusses the results of the data analysis. The objective and research questions of the study are recapitulated. Following, the discussions of the findings are highlighted together with justifications for the significant results. Next, the contributions of the study to the existing literature as well as managerial contributions that might help the decision-makers are presented. This chapter also reviews the limitation of the study and highlights potential direction for future research. Finally, the conclusion is then covered which summarizes the whole chapter.

6.2 Recapitulation of the study

Drawing from resource-based view (RBV) (Barney, 1991; Wernerfelt, 1984), this study generally aimed to investigate the relationship between entrepreneurial orientation (EO), human resource management (HRM) practices, organizational innovation, and organizational performance. It also examined the mediating effect of organizational innovation on the relationship between EO and HRM practices and the moderating effect of managerial ties on the relationship between organizational innovation and organizational performance. To achieve these objectives, data were

gathered from the owners/managers of manufacturing SMEs in the west coast of Peninsular Malaysia. Of 531 questionnaires distributed, only 331 (60.5%) were analyzed using SPSS and PLS-SEM. Significance levels of 0.05 and 0.01 were used as the critical level for decision making on the hypotheses.

Of eight hypotheses on the direct relationships between the determinants of organizational innovation of SMEs, only one hypothesis failed to get empirical support. Of seven hypotheses on mediation, only one hypothesis was rejected, while no support was found for the moderation effect of managerial ties. The finding strongly supported the RBV theory when the main effect of EO and five HRM practices and mediating effects of organizational innovation displayed significant change in the relationship.

The following discusses the findings in greater details. In doing so, the first section discusses the direct relationship between the determinants and organizational innovation and organizational performance, while the second section is devoted to explicating the mediation and moderation results. The discussions of the findings focused only on the significant results. For insignificant results, discussion was not highlighted as conclusion cannot be made due to not enough evidence concerning the existence or nonexistence of the relationship between the constructs (Lane, 2011; Rainey, 2012).

6.3 Discussion

6.3.1 Direct Relationship

6.3.1.1 The Relationship between EO and Organizational Innovation

This study predicted a positive relationship between EO and organizational innovation, which received empirical support. That is, the higher the EO performed by the SMEs, the better its organizational innovation. This finding strongly supported the RBV theory when the EO provides a valuable insight into the owners/managers' role in applying the element of innovativeness, proactiveness and risk taking which can lead to competitive advantage for SMEs and hence sustain their business success (Davis et al., 2010; Kreiser & Davis, 2010). The result is also aligned to previous findings (e.g. Avlonitis & Salavou, 2007; Hult et al., 2004; Rhee et al., 2010; Salavou & Lioukas, 2003; Tajeddini, 2010). Owners/managers of SMEs with EO tend to possess the capacity to introduce innovation in the process, product, or idea in their organization. Moreover, Salavou and Lioukas (2003) found that EO in SMEs was more significant than marketing orientation and technology policy in promoting aggressive behaviour towards innovations. Therefore, the finding implies that EO is an important driver of organizational innovation as it can trigger the firm into innovative actions.

EO is vital to organizational success and an important driver of organizational innovation. It provides a stimulus to drive innovation activities through the properties of innovativeness, proactiveness and risk taking, which can encourage

owners/managers into action for innovative activities. This is because EO is a basic orientation that owners/managers need in successful entrepreneurship (Helm, Mauroner, & Dowling, 2010) and in recognizing business opportunities and running new businesses (Dess & Lumpkin, 2005). This finding indicates that top with high EO normally prefer to use different practices, are aggressive and proactive to ensure their firm success and survival, without the final result. In this context, this strategic orientation is required to assure the development of innovative capability in the organization, which in turn, leads to successful innovation (Branzei & Vertinsky, 2006; Laforet & Tann, 2006; Lawson & Samson, 2001; Zhou, Gao, Yang, & Zhou, 2005). Coulthard (2007) and Matsuno et al. (2002) contended that this strategic practice can be decisive for the success and endurance of a firm due to the constraints of resources and capabilities within SMEs. Furthermore, the finding confirms the opinion of industry experts who have highlighted the importance of EO for Malaysian SMEs as an enabler of organizational innovation (Abdullah, Mei, Shamsuddin, & Wahab, 2014; Bakar & Ahmad, 2010).

6.3.1.2 The Relationship between HRM Practices and Organizational Innovation

Hypothesis 2 until hypothesis 7 proposed a positive relationship between HRM practices and organizational innovation. Five HRM practices, namely communication and information sharing, compensation, performance appraisal, selection, and training and development were predicted to enhance organizational innovation in SMEs. Although only one HRM practice was not significantly related

to organizational innovation, the effect size of HRM practice constructs was smaller than that of EO.

Taken together, the finding provided evidence of a positive relationship between HRM practices and innovation. These are aligned to RBV theory, which explained that HRM practices are unique resources, causally ambiguous, and synergistic in enhancing their competencies (Barney, Wright, & Ketchen, 2001). Therefore HRM practices were one of the key resources of sustainable advantages and performance (Chadwick & Dabu, 2009; Khandekar & Sharma, 2005). This shows that innovation depends on creativity and new ideas among employees that can be fostered through effective HRM practices. The results are consistent with those of earlier studies that concluded that HRM practices are the crucial input for motivating employees to engage in innovative behaviour, and hence, organizational innovation (e.g., Ar & Baki, 2011; Diaz-Fernandez et al., 2015; Fu et al., 2015; Hashim, Ali, & Fawzi, 2005; Jimenez-Jimenez & Sanz-Valle, 2005, 2008; Nasution & Mavondo, 2008; Prieto & Pe´rez-Santana, 2014; Shipton et al., 2005; Shipton, West, Dawson, Birdi, & Patterson, 2006; Smith, Courvisanos, Tuck, & McEachern, 2010; Zhou et al., 2013).

This results can be justified by the profile of the respondents. Most of respondents were from medium-size firms (more than 68%). Accordingly, medium-size firms adopted HRM practices more systematically compared to small-sized firms (Nguyen & Bryant, 2004). Through effective HRM practices, employees are encouraged to

experiment new ideas, develop knowledge and implement changes which lead to innovation activities.

As expected, **communication and information sharing** had a stronger relationship with organizational innovation than other HRM practices. This result is similar to that found previously (Nonaka, 1994 cited in Vlachos, 2008). When employees communicate and share information with each other, synergistic working relationships are developed, encouraging employees to give full cooperation and commitment to the organization through their creativity and flexibility (Ar & Baki, 2011). This relationship can stimulate new ideas that can contribute to innovative behaviour in the organization toward the accomplishment of the company's competitive advantage via organizational technology or management abilities (Liao, Fei, & Chen, 2007). When communication and information sharing is encouraged, trust is developed between employees and employers. In this situation, employees will be motivated to give ideas and suggestion for improvement (Mesmer-Magnus & DeChurch, 2009). Subramaniam et al., (2011) also concluded that a high level of trust facilitates SMEs to promote creativity and flexibility toward organizational success.

Selection was found to be a significant predictor after communication and information sharing. SMEs that practice selection effectively and efficiently are likely to increase their innovation activity. This finding is consistent with previous research (Chen & Huang, 2009; Hashim et al., 2005; Jimenez-Jimenez & Sanz-Valle,

2008) and provides additional empirical evidence of the importance of selection or staffing as a key HRM practice for innovation in SMEs.

Through the process of recruitment and selection, employers can make the best choice of who has the expertise needed to develop the organization. To encourage innovation, people who are creative and innovative are needed if SMEs are to promote innovation in the organization. Although the recruitment or staffing practices tend to be informally done in SMEs, such practice should not compromise the quality of people selected. Some of the techniques used by SMEs are use of employee referrals and walk-ins (Hornsby & Kuratko, 2003). One of the interviewees in Cassell et al.'s (2002, p. 685) study on the subject of employee referral said that, "If you get someone's brother for a job, then you know they will have some commitment to the firm. You will also be able to find out a bit about them before they start". This commitment will enhance employees to work more effectively. This is an opportunity for SMEs to improve their employees' ability to produce good quality of output and management, work in teams and improve problem-solving processes. Thus, through effective recruitment, selection or staffing, employees selected will be an asset to the company as they will produce new ideas in the organization's innovation process (Chen & Huang, 2009; Jimenez-Jimenez & Sanz-Valle, 2008).

It was also found that **compensation** played a significant role in enhancing organizational innovation. The result indicates that higher perceptions of fair and

equitable compensation systems increase the capability of the organization to engage in innovation. This result is consistent with previous research (e.g., Chen & Huang, 2009; Kok & Hartog, 2006) and provides additional evidence of the prominence of the compensation system in stimulating and enhancing the innovation processes within the organization. According to Leede and Looise (2005), an appropriate compensation or reward system can be a boon for positive behaviour in employees. Several researchers contended that HR systems that emphasize performance-based reward is required to create organizational culture conducive for product innovation, regardless of organization size (Chew & Chan, 2008; Lau & Ngo, 2004).

Organizations that practice innovation as the driving force, they can move their employees to tolerate with risk, acquire more products and get newer ideas by creating an effective reward system (Gupta & Singhal, 1993). Besides, a reward system that was based on fairness can encourage employee to be more creative, outstanding and innovative. Therefore, effective reward system can be a powerful message to the employees in seeking and maintaining certain required behaviors in the organizations (Jassim, 2007), which can enhance the organizational performance.

Training and development were also found to increase organizational innovation. This finding is in line with other studies (e.g., Hashim et al., 2005; Jimenez-Jimenez & Sanz-Valle, 2008; Lau & Ngo, 2004; Laursen & Foss, 2003; Li, Zhao, & Liu, 2006; Shipton et al., 2006; Tan & Nasurdin, 2010). Training and development prepares employees to be develop multiple talents, skills, and knowledge needed for innovation activities (Li et al., 2006), as extensive training activities facilitate the

development of new knowledge and ideas crucial for innovative behaviour (Tan & Nasurdin, 2010).

Since SMEs in Malaysia tend to be short on resources to conduct formal training for their employees, they can take advantage on the various training facilities and programs provided by the government (Osman et al, 2011b). One of the facilities provided is the Human Resource Development Fund (HRDF) that allows SMEs to be reimbursed for their training programs provided that such training is registered with HRDF. The use of HDRF has been encouraging. There was an increase in expenses from RM44.1 million that was spent running 30 programs in 2013 to RM 88.2 million, which involved 35 programs to benefit 31,540 employees of SMEs (NSDC, 2014). The positive role of HRDF in helping SMEs has also been recognized by the World Bank as the trainings provided not only are value-added and offer a good return for investment of the companies, but they also increase labor productivity and wages (NSDC, 2012b). This reflects that SMEs are willing to train and develop their employees with skills, knowledge, capabilities, technical know-how and best practices so that they can improve their employees' ability at both personal and technical levels.

Performance appraisal was also found to enhance organizational innovation of SMEs. This result is similar to that obtained by Leede and Looise (2005), who concluded that the implementation of good performance appraisal is a sign of support or encouragement to employees to work more effectively. Jiménez-Jiménez and

Sanz-Valle (2008) further noted that such practice can elevate employees' motivation to embark on innovation activities.

A proper evaluation of employee performance can guide in shaping and motivating employees by giving them feedback on their work performance as well as it provides information on employees' capabilities in performing their jobs (Jassim, 2007). The evaluation process is also an important avenue for SMEs to develop their employees' capabilities by allocating more time in providing a developmental response, communicating problems and seeing new prospects to produce rather than concentrate on monitoring and controlling (Delery & Doty, 1996). In other words, rather than being result-oriented, a good performance appraisal should also focus on developing the employees by coaching and guiding them about the expected behaviour i.e. innovative behaviour. To achieve this, the employees should be encouraged to work as a team and not linking remuneration to appraisal. This is because doing so will impede innovation in the production process due to individualistic approach to work activity (Shipton et al., 2005).

Contrary to expectation, **job design** was not found to be significant in enhancing OI. This finding contradicts previous assertions that job design need to be included in current studies as it is part of a high performance work system that can affect employee experience of work, employee well-being and job satisfaction (Laursen & J.Foss, 2003). This was further supported by Schuler and Jackson (1987), who emphasized organization should design jobs that work with tolerance and ambiguity as well as permitting their employee a freedom in developing new ideas and working

in team, and which in turn enhances innovation (Klaas, McClendon, & Gainey, 2000). However, it is consistent with Guest, Conway, and Dewe (2004), who found that there was slight evidence of a significant interaction between the new invention of human resource practices related to organizational outcomes of performance, innovation, work relations and employee turnover.

The lack of a significant relationship between job design and OI may be explained by the lack of formal approach of HRM practices in SMEs due to the limited size and resource availability (De Kok & Uhlaner, 2001). In the Malaysian context, such informal HRM practice may be the norm. Daud and Mohamad (2010) showed that a majority of 108 SMEs surveyed used an informal approach in managing their HR practices. In addition, the owners/managers of the sampled SMEs may have not given full empowerment to their employees in carrying out their tasks and all the operations within the organization are still under their supervision. Such style of supervision can demoralize intrinsic motivation that is crucial for creativity and innovative behaviours of employees. Oldham and Cummings (1996) argued that employees deliver the most creative work in a situation with non-controlling supervision where employees are free to explore new ideas.

Thus, agreeing to our results, the appropriate HRM practices that support innovation is considered the most prominent resource for innovation in SMEs. In addition, this study also found that certain HRM practices are not relevant in some contexts such as job design, as it did not support the relationship of job design-innovation. Therefore, the need to identify the HRM practices that affect innovation activities are

crucial in order to boost organizational innovation in SMEs as described by Jimenez-Jimenez and Sanz-Valle (2005). However, there is no consensus on which HRM practices support innovation. In essence in taking into account the discussion relating HRM practices and SMEs, the results indicate that SMEs in Malaysia substantially emphasizes HRM practices in the fields of strategic HRM practices, but to a lesser extent.

In conclusion, it is crucial to reveal that the present study provides empirical evidences regarding the substantial contribution of HRM practices to organizational innovation in SMEs. Given that the majority of the literature on the issue reflect the role of the broader HRM concept within the context of large firms, this is a useful development. Thus, likewise it is interesting to mention that industry experts believe that most of Malaysian SMEs do not pay attention to the development of HRM practices. In fact, they still practice traditional HRM practices in a very simple and ad hoc basis. However, this study provides empirical evidences that HRM practices such as information sharing, selection, compensation, training and development and performance appraisal, are important contributors to organizational innovation in Malaysian SMEs. In this respect, changes should be encouraged and performed widely in approaching HRM practices that have been dismissed thus far by SMEs. This would help SMEs to redefine themselves by implementing the new approach of HRM practices that cultivate more innovative activities within the organization.

6.3.1.3 The Relationship between Organizational Innovation and Organizational Performance

A significant and positive relationship between organizational innovation and organizational performance was found, consistent with the hypothesis formulated. This finding is consistent with the RBV theory. According to RBV theory, organizational innovation is a strategic capability of SMEs to develop a wide range of valuable, rare, inimitable and differentiated resources, which lead to enhance competitive advantages and improved firm performance (Akman & Yilmaz, 2008; Calantone et al., 2002; Romijn & Albaladejo, 2002).

The finding is also consistent with previous findings on the positive role of organizational innovation in organizational performance (Diaz-Fernandez et al., 2015; Kitapci et al., 2012; Lee & Hsieh, 2010; McDermott & Prajogo, 2012; Rosenbusch et al., 2011). Baregheh et al., (2009) emphasized that innovation is broadly regarded as the means of support for the organization to survive and grow, as it plays a major role in creating value and sustaining competitive advantage. Organizations that actively innovate, whether in new products or services, a new production of technology, a new structure, or administrative system, plan or program, will be able to compete better and hence perform better (Damanpour & Gopalakrishnan, 2001; Damanpour & Schneider, 2006).

According to Garcia-Morales et al., (2006), organizations should innovate as an essential requisite to acquiring high levels of performance. Understanding and

managing the process of organizational innovation becomes a vital capability that needs to be developed, as innovative activity is important for the firm's success. Organizations that adopt innovation in their activities will be one step ahead of their competitors. By mixing different strategies and opportunities, they can grow and survive better. Indeed, capability to innovate can be effective strategic capabilities for SMEs to address the problems associated with smallness and newness. In fact, smaller organizations are more innovative than larger organizations, although the implementation of innovation may be slow due to lack of resources (Dean et al., 1998). Due to the simple structure of the organization, SMEs are generally faster, more responsive, and more flexible toward their dynamic environments. In addition, small business owners or entrepreneurs, often take the initiative and are willing to take risks in conducting their business.

In short, when SMEs develop and innovate their activities pertaining to all processes involved, products and managerial works, these activities may reduce the administrative requirements and can accelerate innovation projects. As a result, organizational performance of SMEs will improve. In their meta-analysis, Rosenbusch et al. (2011) concluded that by developing the innovation internally, SMEs can increase their performance significantly.

The World Bank has recognized that innovation and the use of technology in Malaysian SMEs are the most important lever of performance in achieving the goals set under the SME Masterplan. In 2014, the Government allocated RM13.3 billion

for the implementation of the 154 programs to promote innovation and the use of technology expected to benefit 484,000 SMEs (NSDC, 2014). Such programs further give credence to the role of organizational innovation in facilitating SME performance in the long run.

6.3.2 The Mediation Effects of Organizational Innovation

6.3.2.1 The Mediation Effects of Organizational Innovation on EO and Organizational Performance

In this study, EO was found to enhance organizational performance through organizational innovation. Theoretically, the mediation role of the organizational innovation can be explained via RBV theory. According to RBV theory, the SMEs can strategize their superior resources to gain competitive advantage and increased performance (Runyan et al., 2007). The ability of the SME to use their EO to influence the capability of SME to innovate will then can foster the SMEs to gain competitive advantage and hence improved their organizational performance (Davis et al., 2010; Kreiser & Davis, 2010). This finding is also in line with previous (e.g. Hoq & Ha, 2009; Hult et al., 2004; Lee & Hsieh, 2010; Nasution et al., 2011; Rhee et al., 2010). For example, Hult et al. (2004) found that innovativeness, defined as the capability of organization to introduce some new process, product, or idea in the organization, appeared to be a key mediator in the EO and business performance linkage. Rhee et al. (2010) also revealed that both market orientation and EO had a positive effect on innovativeness through learning orientation, which in turn affected performance.

Innovation is one of the key processes in which SMEs can contribute to the improvement of the economic dynamism of each industry (Keizer et al., 2002). Therefore, innovation was selected to explain performance. In entrepreneurship, innovation is an intrinsic condition that facilitates the success of a firm (Avlonitis & Salavou, 2007; Garcia-Morales et al., 2006). Helm et al. (2010) also considered entrepreneurial innovation as the mediator between motivation and entrepreneurial success. The model shows that entrepreneurial orientation of entrepreneurs affects the performance of a new venture through the organization's capability of generating innovation.

Overall, the result showed that the owners/managers' perception about entrepreneurial orientation is critical in driving organizational innovation in SMEs. When the owners/managers of SMEs are high in EO, they produce creative ideas that accelerate innovation activities in product, process, and management, which in turn, boost SME performance. Even though innovation involves risks and uncertainty despite the high initial investment, the benefits of competitive differentiation, customer loyalty, premium prices for innovative products and barriers to entry for potential imitators can offset the costs. Taken together, the innovative activities enhance productivity and hence better firm performance. This means that SMEs need to improve their entrepreneurial orientation strategy to stay innovative for improved organizational performance.

6.3.2.2 The Mediation Effects of Organizational Innovation on HRM Practices and Organizational Performance

Of six HRM practices postulated to impact performance through organizational innovation, only job design did not show a significant result. Other practices (i.e. communication and information sharing, compensation, performance appraisal, selection and training and development) were found to enhance performance of SMEs through organizational innovation. The significant mediating role of organizational innovation between these HRM practices and organizational performance is consistent with the RBV theory. This means when SMEs utilizes their HRM practices effectively, this will encourage the SMEs to engage with the innovation activities, which can lead to competitive advantage and thus improved their performance (Barney, Wright, & David J. Ketchen, 2001; Chadwick & Dabu, 2009; Khandekar & Sharma, 2005).

The role of HRM practices in enhancing organizational innovation and hence performance is substantiated by previous works (e.g. Jimenez-Jimenez & Sanz-Valle, 2008; Kok & Hartog, 2006; Lau & Ngo, 2004; Mavondo, Chimhanzi, & Stewart, 2005; Nasution, Mavondo, Matanda, & Ndubisi, 2011). According to Jimenez-Jimenez and Sanz-Valle (2008) and Shipton et al. (2006), SMEs recognize the potential of HRM to add value to their organization. By proactively engaging in HRM practices, firms will be able to attract, develop, motivate, and retain their employees to be inventive and creative, organizations benefit in terms of improved performance.

Apparently, while there is agreement in the literature about the relationship between HRM practices and organizational performance, and yet there are still inconsistencies in the literature about which combination of practices is good or better than other combinations that have an impact toward innovation and performance in SMEs. Most empirical studies do not clarify these doubts due to the heterogenous of the samples, methodologies, measures and results (Jimenez-Jimenez & Sanz-Valle, 2005). Evidently, there is a comprehensive list of HRM practices that can affects organizational performance, but not all the HRM practices being able to affect organizational performance, either directly or indirectly (Ahmad & Schroeder, 2003; Cardon & Stevens, 2004). Literatures also indicate that HRM practices in SMEs were given less attention due to the limited size and resource availability (Klaas et al., 2000), and also because SMEs are assumed to adopt informal HRM practices (De Kok & Uhlaner, 2001). Although HRM practices are generally discussed in the context of large organizations (Heneman, Tansky, & Camp, 2000; Hornsby & Kuratko, 2003; Tansky & Heneman, 2003), the result of this study supports the idea that HRM practices are an important component for smaller firms (e.g., Bacon, Ackers, Storey, & Coates, 1996; Heneman et al., 2000; Hornsby & Kuratko, 1990; Jones, Knotts, & Scroggins, 2005). Thus, drawing from universalistic or "best practices," these findings showed which HRM practices that are important to SMEs that can affect their organizational performance. These findings are among the contributions of this study regarding which HRM practices that really contribute to better organizational performance and researchers gaining a deeper insight into the extent to which HRM practices are likely to impact upon organizational performance in SMEs.

The results of this study also prove the existence of an indirect effect from HRM practices on SMEs organizational performance through its effect on organizational innovation. This may be attributed to the constraints faced by SMEs in Malaysia. More specifically, it is often argued that SMEs treat HRM practices as rather *ad hoc* and informal. Thus, it can be assumed that in SMEs, the probability of HRM could not directly affect the performance of the organization, but indirectly affect performance by developing capabilities and behaviors that can increase the activity of innovation and, ultimately to improve the organizational performance. Therefore, the findings also contribute towards closing the theoretical gap on the primary mechanism that explains how HRM practices relate to organizational performance (Mayson & Barrett, 2006; Messersmith, Patel, Lepak, & Gould-Williams, 2011; Takeuchi, Lepak, Wang, & Takeuchi, 2007; Wall & Wood, 2005; Wright, Gardner, Moynihan, & Allen, 2005). In sum, in the context of SMEs, good HRM practices need to be implemented to promote organizational innovation for the better performance of an organization. These results clearly indicate that organizational innovation plays an intermediate role in the link between HRM practices (i.e. communication and information sharing, selection, compensation, training and development, and performance appraisal) and organizational performance of SMEs.

Similarly, as discussed in the direct relationship between job design and organizational innovation, job design did not reach statistical significance in any of the predicted hypotheses. Apart from the justification given earlier, the explanation for insignificant results of the mediation effect of organizational innovation on the relationship between job design and organizational performance can be associated

with the selection of HRM practices used in this study. This study has selected the firm's HRM practices that adhere to the best HRM practices that foster innovation, as suggested by previous literatures. Yet, agreeing to a contingency approach, by taking into account the competitive strategy of cost or quality, there are perhaps other configurations of HRM practices are better affect the performance. This explanation also can close the loop of the weak effects of HRM practices compared to the effect of entrepreneurial orientation on organizational innovation and performance of SMEs.

In conclusion, the results from the mediation effects of organizational innovation imply that the higher the perception of owners/managers of SMEs on the five HRM practices identified by this study, the more likely the organization to express higher levels of organizational innovation, the more likely the organization to increase their performance. The findings of this study provide evidences of a positive relationship between the five HRM practices and innovation as well as the mediating effects of organizational innovation in relation to the five HRM practices and organizational performance. As anticipated, the acceptance of a specific set of HRM practices promotes innovation activities. Thus, the role of effective HRM practices aims to produce a stable group of employees in the company, which can generate new ideas, more creative, can adopt risks and experimentation during the decision making process that can affect organizational businesses. These conditions are likely to further encourage innovation activities.

Thus, previous studies conclude that the five HRM practices are the crucial inputs for organizational innovation, and the most powerful in motivating employees to improve their innovative behaviour, and thus can enhance organizational performance. Particularly, these findings established that SMEs need to integrate EO and HRM practices (i.e. communication and information sharing, selection, compensation, training and development, and performance appraisal) in order to foster organizational innovation in their organization, which in turn boosts their performance (Jimenez-Jimenez & Sanz-Valle, 2008; Nasution et al., 2011). This indicates that organizational innovation is really important in improving organizational performance as well as act as a mediator in other relationships where performance is the dependent variable (Gronum, Verreynne, & Kastelle, 2012).

6.3.3 The Moderating Effects of Managerial Ties

Finally, the last hypothesis proposed that managerial ties moderate the relationship between OI and OP. Contrary to expectation, no moderation was found of managerial ties, making the finding inconsistent with previous works. For instance, several researchers (Acquaah, 2007; Peng & Luo, 2000; Stam & Elfring, 2006) showed that the ties of managers and government officials can influence positively a business venture. Managerial ties also were found to be a moderator in previous studies (Boso, Story, & Cadogan, 2013; Stam & Elfring, 2008; Walter, Auer, & Ritter, 2006).

The finding suggests that although the owners/managers do not consider the important role of the managerial ties, SMEs can still achieve higher performance through innovative activities carried out within the organization. This indicates that the role of OI in Malaysian SMEs is more crucial than that of managerial ties in influencing performance. Organizational innovation seeks to impact directly on the performance of the organization and this study showed a strong relationship between the two. When process, products and management are innovatively implemented, SMEs can reduce administrative requirements and accelerate innovation projects, which in turn enhance performance. This is similar to Rosenbusch et al.'s (2011) conclusion in their meta-analytical study. They noted that by developing innovation internally, SMEs can increase their performance significantly.

Another possible reason for the lack of moderation effect may be because the sampled SMEs emphasize personal and social ties more with other organizational managers and government officials, which may not have a significant impact on their performance. Since SMEs are faced with increased market competition, they need to have a more formal relationship with other organizations and government officials to protect their interests. When market competition increases, the value of personal and social ties tends to diminish (Luo, Huang, & Wang, 2012). Zhang and Keh (2010) also of the opinion that market competition drives organizations to choose the approach that is more efficient and effective which is formal contracts rather than informal ties. Moreover, personal ties are easy to exploit and are open to abuse of trust, corruption and failure in collaboration. In Malaysia where generally social trust

is low and moral constraints are weak, the use of formal contractual relationships in SMEs are better than no contract at all (Zhang & Keh, 2010).

Another plausible reason for the insignificant role of managerial ties might be due to its overlapping with other variables in the present study. As depicted by Gronum et al. (2012), the relationship between networks and performance is less evident that the relationship between networks and innovation. This suggests that managerial ties may better be an antecedent to innovation than as a moderating variable in influencing the innovation-performance linkages. Despite this claim, more research needs to be done to verify it.

6.4 Contributions of the Study

This study has significant theoretical, methodological and managerial implications, discussed below.

6.4.1 Theoretical Contributions

As was discussed in Chapter 1, the contribution of this research lies in identifying multiple ways through which organizational resources and capabilities impact on organizational performance of SMEs. Generally, the theoretical value of this research is that it has established the relevance of resource-based view theory in explaining the interaction between entrepreneurial orientation (EO), HRM practices, organizational innovation, managerial ties and organizational performance in a single

model. Indirectly, this study provides a new direction in research on the predictors of organizational performance in the context of Malaysian SMEs.

In recent years, there has been a continuous demand for multi-disciplinary research in HRM and Entrepreneurship (Baron, 2003; Katz et al., 2000; Tansky & Heneman, 2003). Significant benefits to organizations can be reaped if both fields are more closely linked (Baron, 2003). For instance, researchers can better understand how HRM drives entrepreneurial behavior and helps initiate a new venture. In addition, this close link may also help researchers understand how HRM theories can be applied to new and smaller firms (Barrett & Mayson, 2007). This is essential, as pointed out explicitly by Tansky and Heneman (2003), where SMEs have been too long treated as second-rate firms by researchers in the field of HRM. Entrepreneurs do not work alone; they also require human inputs to function, and these people need a system to manage them towards realizing the goals of the firm. This shows that human resource management are more critical, especially for rapidly growing firms. Fast growth creates strong pressures on available resources and organizational systems, which in turn influence the actions of managers and employees. Thus, the close link between the two fields will bring new knowledge to the field of entrepreneurship on how to spur new economic activities.

Moreover, this study attempted to narrow the gap in the literature regarding the role of a mediator and moderator. As discussed in Chapter 1 and Chapter 2, examining the indirect relationship has been widely accepted as an investigative approach (Lumpkin et al., 2006; Rhee et al., 2010; Stam & Elfring, 2008). Indeed, the results

of this study showed that the relationships between EO and HRM practices (communication and information sharing, selection, compensation, training and development, and performance appraisal) on organizational performance should be indirect, particularly in the context of SMEs. This study shows that relying on the direct relationships between EO, HRM practices and performance provides an incomplete understanding of small business performance.

EO, HRM practices, organizational innovation, and managerial ties have been investigated as predictors of organizational performance (Acquaah, 2007; Frank et al., 2010; Huselid, 1995; Huselid et al., 1997; Irene, 2006; Peng & Luo, 2000; Rauch et al., 2009; Rhee et al., 2010; Wiklund, 1999; Wright et al., 2005). However, to the best of researcher knowledge, there is no single study that has simultaneously investigated these organizational resources and capabilities on organizational performance of SMEs. By doing so, this study adds to the existing literatures on the drivers of organizational performance of SMEs.

This study also contributes in expanding HRM research in small organizations particularly in Malaysia. Most HRM studies were conducted in large organizations and disregarded small organizations (Huselid, 1995; Jackson & Schuler, 1995). But, HRM is equally important to smaller organizations. This study provides empirical evidence that HRM practices such communication and information sharing, compensation, performance appraisal, selection and training and development affect SMEs performance indirectly. This study also showed which HRM practices are significant in determining innovation in SMEs and hence improved performance.

The research findings are consistent with resource based view in that organizational resources and capabilities (i.e. good HR system) can create a competitive advantage for firms to perform better.

The role of organizational innovation as a mediator in this study is one of the contributions of this study. It offers a nuanced understanding of how EO and HRM practices enhance organizational performance. As organizational innovation is a lifeline of SMEs, developing organizational innovation is important. And this can be developed with the implementation of good HRM practices and EO strategy. In particular, the finding confirms previous literature (Jimenez-Jimenez & Sanz-Valle, 2008; Nasution et al., 2011) that SMEs need to integrate EO and HRM practices (communication and information sharing, selection, compensation, training and development, and performance appraisal) to foster organizational innovation in their organization to boost their performance. This indicates that innovation is an important factor in improving organizational performance (Gronum et al., 2012).

This study also showed owners/managers of SMEs need not rely solely on the cooperation with external partners in order to be successful as claimed by past studies (Biggs & Shah, 2006; Farinda et al., 2009; Xu et al., 2008; Zeng et al., 2010). Instead, Rosenbusch et al. (2011) recommended SMEs to focus on the development of internal innovation, which can directly improve the performance of SMEs. The finding also supports the meta-analytical results by Rosenbusch et al. (2011), which revealed that due to the liability of newness and smallness, SMEs might have problems in dealing with external innovation partners.

6.4.2 Methodological Contribution

Apart from theoretical contributions, this study also contributes toward methodological considerations. Many studies relied on the traditional instrument validation such as factor analysis and Cronbach's alpha coefficient for reliability purposes. But such analyses are insufficient to fulfill the current needs of an increasingly complex analysis. Hence, PLS-SEM path modeling was employed to validate the measurement and hypothesized linkages among the variables. The systematic assessment of the measures applied in this study can contribute to help future researchers develop more reliable and valid measures.

Firstly is with regards to EO measure. Many studies have ignored the dimension of innovativeness of EO when investigating EO-innovation linkage (e.g., Hult et al., 2004; Lin, Peng, & Kao, 2008; Rhee et al., 2010). But, this study deviated from the norm and retained the dimension of innovativeness because it was different conceptually from the construct of organizational innovation. EO encompasses strategies and actions that can be taken by the firm to realize the corporate orientation (e.g., Hult et al., 2004; Lin et al., 2008; Rhee et al., 2010). However, organizational innovation involves organizational change processes that enable firms to achieve several kinds of competitive advantage, thereby contributing to performance.

Secondly is with regards to organizational innovation measure. Studies have either used a unidimensional scale (Akman & Yilmaz, 2008; Hurley & Hult, 1998) or a

multi-dimensional scale (Lee & Hsieh, 2010; Luk et al., 2008; C. L. Wang & Ahmed, 2004; H.-K. Wang et al., 2008) to measure organizational innovation. Some studies have also focused on product innovativeness (Avlonitis & Salavou, 2007; Danneels & Kleinschmidtb, 2001), while others have conceptualized innovative capability as enterprise performance (Liao, Fei, & Chen, 2007). Previous studies (e.g., Hult et al., 2004; Lin et al., 2008; Rhee et al., 2010; Tajeddini, 2010) also tended to measure innovation with five items adapted from Hurley and Hult (1998). In contrast, the present study adopted and adapted the instrument developed by Che-Ha and Mohd-Said (2008, 2012), who conceptualized organizational innovation as the process of accepting, adopting and implementing new ideas in the organization which is described by product, process and managerial innovations. The innovation characteristics embedded in this measurement appear to be more comprehensive and relevant especially to Malaysian SMEs. In responding to their suggestion, the measurement should be validated in different groups and different environments.

A measurement scale needs to be cross-validated to verify its validity and reliability. To that end, the composite reliability, convergent validity and discriminant validity were all examined and found to be above the minimum threshold. In other words, all measures used in the present study were reliable and valid in the context of Malaysian SMEs manufacturing sector. Furthermore, analysis of second order constructs of EO, organizational innovation, managerial ties, and organization performance showed that they were adequately fit into the structural model. Thus, this study contributes to the methodological perspective by offering a parsimonious model.

6.4.3 Managerial Implications

This study offers some implications for owners/managers of SMEs on how to deal with organizational resources and capabilities to improve their organizational performance.

As organizational innovation is key in affecting organizational performance and an important source of competitive advantage, especially to SMEs, a special emphasis should be given to fostering a culture of innovation in organizations. The management must recognize the strategic capabilities of EO and HRM that affect organizational innovation.

Firstly, this means that good human resource practices such as communication and information sharing, selection, compensation, training and development, and performance appraisal should be in place for such culture to develop. That is, the owners/managers of SMEs in Malaysia need to realize the potential of HRM practices (communication and information sharing, selection, compensation, training and development, and performance appraisal) to add value to their organizations. Thus, the findings can be used as a guide to assist SMEs owners/managers to identify which HRM practices that can be observed to improve the current HRM practices. Five HRM practices were highlighted in this study (e.g., communication and information sharing, compensation, performance evaluation, selection, and training and development) were identified to help SMEs to improve their performance. Therefore, it is expected that the new empirical findings of this study can serve as a

stimulus to the management of SMEs in order to take into consideration as well as to be more focus on managing human resources by having a formal HRM system and practices. This can be done through the mentor-mentee system with a large organization.

Secondly, strategies to develop entrepreneurial orientation at every level of the organization should be designed as a way to promote organizational innovation. To enhance entrepreneurial orientation, the owners/managers of SMEs need to support novelty and engage in research and creative process. They also need to be proactive to seize opportunities that exist in new or existing markets. They also need to take risks in developing their product, service and new processes when entering a new market or industry. Therefore, when the owners/managers promote the EO throughout the organization, the activity of innovation and creativity can be developed and this is the key to the growth of the firm.

Finally, this finding also provides some important managerial implication regarding the role of managerial ties. The insignificant moderating role of managerial ties in the relationship between organizational innovation and organizational performance provides an obvious warning to SMEs about the values of ties. High utilization of managerial ties could undermine the ability of SMEs to perform in the marketplace in certain conditions. That means, tie utilization does not seem to create economic value in high intensity of competitive conditions or low structural uncertainty (Luo, Huang, & Wang, 2012).

Therefore, this finding alerts the owners/managers of SMEs to be more careful in developing ties and networks to reach better performance, particularly during the growing competition or stable industrial conditions. However, the insignificant of managerial ties within this context, does not minimize the use of managerial ties in explaining variations in SMEs performance. As SMEs increasingly gains better insights and get recognition from the market, they are able to shift the focus to be more active in dealing with the external cooperation with more attractive conditions.

6.5 Limitations of the Study

The findings from this study are subject to several limitations that need to be noted. Firstly is the use of a cross-sectional research design. Even though this design was used because of time and cost constraints, causality cannot be inferred.

Secondly, the findings of this present study may not be generalized to a larger population especially SMEs outside Malaysia because of some potential differences in characteristics of SMEs in Malaysia and those in other countries. The findings are also not generalizable to large companies in Malaysia as well.

Thirdly, since this study was quantitative in nature, answers given by the respondents could have been biased. However, as the validity and the reliability of the subjective instruments were established and common method variance was found to be of not a threat, such biased answers were not an issue. But, if researchers wish to get in-depth understanding of the processes and mechanisms involved at the same time, they

should consider using mixed research design in which quantitative and qualitative approaches are used.

6.6 Recommendations for Future Research

The limitations noted above offer opportunities for future research. Firstly, future research should employ longitudinal research design so that causality between the variables can be inferred. Longitudinal research and analysis could add more value to understand the complex relationships and the changes that occur within a specified period of time. Alternatively, a case study approach can be considered as an option to examine the dynamic effects of EO, HRM practices, and organizational innovation on organizational performance, This approach allows researchers to discover in detail the complex relationships and provide information regarding the possible success factors.

Secondly, to enhance generalizability, future research should expand the sampling frame by including other directories published by other agencies such as Department of Statistic Malaysia, Bank Negara Malaysia, and Federation of Malaysian Manufacturers (FMM). Moreover, future studies could be conducted in different SME sectors including primary agriculture and services throughout Malaysia. Conducting a study in the service sector is pertinent as this sector is poised to be the driver of future development, projected to reach a 65% share of GDP by 2020 (NSDC, 2012b). Future studies also could be carried out in large organizations since they tend to have a comprehensive HRM system. Future studies may also wish to

consider studying SMEs in other countries. This will permit some form of comparisons across countries. As such, best practices can be learnt as to how some SMEs operate in enhancing better performance.

Thirdly, this study has identified only organizational innovation as the mediator variable. Other mediator variables such as organizational culture, organizational learning capability and knowledge management capacity should also be considered to help us understand more mechanisms at work that explain why EO and HRM practices affect organizational performance.

Finally, besides managerial ties, other moderator variables such as environmental competitiveness, type of sector, the cultural context, age of the firm, cluster of R&D, and organizational structure may help understand how organizational performance is better enhanced.

6.7 Conclusion

This study investigated the relationship between entrepreneurial orientation (EO), HRM practices (communication and information sharing, selection, compensation, training and development, job design and performance appraisal) and organizational performance in the context of Malaysian SMEs. It also examined the mediating effect of organizational innovation and the moderating effect of managerial ties. Resource-based view of the firm and social capital theory were used as a basis to understand the theoretical relationships.

The research model received much empirical support as majority of the hypotheses were supported. EO and five HRM practices were found to enhance organizational performance through the mediation of organizational innovation. Managerial ties did not moderate the relationship between organizational innovation and performance. The findings suggest on the need for the owners/managers of SMEs to develop suitable strategies to develop EO and to implement a good HR system, as these could promote organizational innovation, which is key for enhanced organizational performance.

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APPENDIX A

Questionnaires

Dear respected Owner / Manager,

A SURVEY ON THE PERFORMANCE OF SMALL AND MEDIUM-SIZED ENTERPRISES IN MALAYSIA

Recognizing that the future of SMEs in Malaysia relies heavily on the efforts of the SME owners such as yourself, I am eager to learn about your own experiences in managing your business. Particularly, I am looking for information about factors that could enhance the organizational performance of SMEs. I am convinced that your contribution serves as a guideline for realizing the positive efforts in producing more successful SMEs in Malaysia.

Therefore, you can display your commitment to develop SMEs in Malaysia by completing this survey and then return it in the envelope provided. I am interested in your opinions, there are no right or wrong answers. All the information provided by you will be treated as confidential and will only be used for academic purposes. Your participation in completing the questionnaire is very important and critical to ensure the success of this research. If you are interested with the findings of the research, please attach your business card and email address in the envelope provided to enable me to send you the summary of the results obtained. It will be an honor if you could return the completed questionnaire before or by _____.

I would appreciate it if you could return the questionnaire as soon as possible. Thank you in advance for your cooperation. If you have any questions, please contact me at **012-4945554 / 04-9285058**.

Yours sincerely,

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SECTION A

The following statements best describe po ssible **perception that owners/managers might have about the HRM practices that are exercised by the organization.** Please circle the relevant number based on the rating scale provided.

Strongly Disagree **Strongly Agree**				
1	**2**	**3**	**4**	**5**

1	Employees are involved in job rotation.	1	2	3	4	5
2	Employees are empowered to make decisions.	1	2	3	4	5
3	Jobs are designed around individual skills and capabilities of employees.	1	2	3	4	5
4	Selection process is comprehensive (uses interviews, tests, etc.).	1	2	3	4	5
5	Selection emphasizes candidates' ability to collaborate and work in teams.	1	2	3	4	5
6	Selection involves screening many job candidates.	1	2	3	4	5
7	Selection focuses on selecting the best all-around candidate, regardless of the specific job.	1	2	3	4	5
8	Selection emphasizes promotion from within.	1	2	3	4	5
9	Selection places priority on potential of candidates to learn.	1	2	3	4	5
10	Training is continuous.	1	2	3	4	5
11	Training programs are comprehensive.	1	2	3	4	5
12	Training programs strive to develop firm-specific skills and knowledge.	1	2	3	4	5
13	The training programs emphasize on-the-job experiences.	1	2	3	4	5
14	Performance is based on objective, quantifiable results.	1	2	3	4	5
15	Performance appraisals include management by objective with mutual goal setting.	1	2	3	4	5
16	Performance appraisals include feedback on employee self-development.	1	2	3	4	5
17	Incentives are based on team performance.	1	2	3	4	5
18	Compensation packages include an extensive benefits package.	1	2	3	4	5
19	Compensations include high wages.	1	2	3	4	5
20	The incentive system is tied to skill-based pay.	1	2	3	4	5
21	Compensation is contingent on performance.	1	2	3	4	5
22	Organizational information is shared with employees.	1	2	3	4	5
23	Open and transparent communication is encouraged among employees.	1	2	3	4	5
24	Family day is organized from time to time.	1	2	3	4	5
25	Supportive work environment is provided.	1	2	3	4	5
26	Employees' contribution is appreciated.	1	2	3	4	5
27	Fairness is prioritized in management practices.	1	2	3	4	5

SECTION B

The following statements best describe possible **perception that the owners/managers might have about the approach to decision-making and entrepreneurial strategy that is used by the organization.** Please circle the relevant number based on the rating scale provided.

Strongly Disagree						**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**

In general, my firm favors…								
1	… a strong emphasis on R&D, technological leadership, and innovations.	1	2	3	4	5	6	7
How many new lines of products had your firm marketed in the past 3 years'?								
2	… very many new lines of products.	1	2	3	4	5	6	7
3	… changes in product lines have usually been quite dramatic.	1	2	3	4	5	6	7
In dealing with its competitors, my firm…								
4	… typically initiates actions which competitors then respond to.	1	2	3	4	5	6	7
5	… is very often the first business to introduce new products, operating technologies, administrative techniques.	1	2	3	4	5	6	7
6	… typically adopts a very competitive, "undo-the-competitors" posture.	1	2	3	4	5	6	7
In general, my firm has . . .								
7	… a strong proclivity for high risk projects (with chances of very high return).	1	2	3	4	5	6	7
In general, my firm believes that…								
8	… owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objective.	1	2	3	4	5	6	7
When confronted with decision-making situations involving uncertainty, my firm…								
9	… typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	1	2	3	4	5	6	7

SECTION C

The following statements best describe possible **perception that the owners/managers might have about the capability of the firm to innovate.** Please circle the relevant number based on the rating scale provided.

Strongly Disagree **Strongly Agree**					
1	**2**	**3**	**4**	**5**	**6**

1	Change employee attitudes (eg. through training, awareness campaigns on company's vision/goals, quality management, teamwork etc).	1	2	3	4	5	6
2	Change work practices (e.g employing foreign labour, more capital intensity, more skilled labour, more decentralisation/delegation of tasks etc.).	1	2	3	4	5	6
3	Change human relation practices (eg. through collective agreement, open-door concept, employee suggestion programme).	1	2	3	4	5	6
4	Reward individuals for innovative ideas.	1	2	3	4	5	6
5	Apply good quality practices (eg. ISO, Good Manufacturing Practice (GMP), Total Quality Management, Quality Circles, Job Rotation/Multi – Skilling, Performance Related Pay).	1	2	3	4	5	6
6	Introduce new ranges of products.	1	2	3	4	5	6
7	Introduce modified products.	1	2	3	4	5	6
8	Upgrade the quality of products.	1	2	3	4	5	6
9	Manage to sell product to a new segment of domestic market.	1	2	3	4	5	6
10	Manage to sell product to a new segment of export markets.	1	2	3	4	5	6
11	Use new strategies (eg. ICT) to promote or advertise products.	1	2	3	4	5	6
12	Use new ways to finance our business (eg. export credit financing/refinancing, joint ventures, venture capital, etc)	1	2	3	4	5	6
13	Change the organizational structure (eg. creating new departments, adding top posts/managers, creating special team/group etc).	1	2	3	4	5	6
14	Use latest equipment/devices to process products or deliver our services.	1	2	3	4	5	6
15	Use latest software/hardware in our administration or management (eg. accounting, personnel, sourcing, purchasing and supplying).	1	2	3	4	5	6

SECTION D

The following statements best describe possible **perception that owners/managers might have about the extent to which they have utilized social ties, networks, and connections during the <u>past three years</u> with managers at other firms and government officials**. Please circle the relevant number based on the rating scale provided.

Very Little						**Very Extensive**
1	**2**	**3**	**4**	**5**	**6**	**7**

1	My firm has utilized social ties with buyers/customers.	1	2	3	4	5	6	7
2	My firm has utilized social ties with suppliers.	1	2	3	4	5	6	7
3	My firm has utilized social ties with distributors.	1	2	3	4	5	6	7
4	My firm has utilized social ties with relevant government officials (e.g. FAMA, MARA, MIDA, or others).	1	2	3	4	5	6	7
5	My firm has utilized social ties with SME support institutions (e.g. SME Corp, MITI, MATRADE, or others)	1	2	3	4	5	6	7
6	My firm has utilized social ties with financial institutions (e.g. SME Bank, Bank Pembangunan, Agro Bank or other financial institutions).	1	2	3	4	5	6	7

SECTION E

With reference to the performance of your organization over **the <u>past 12 months</u>,**

a) Please indicate **the degree to which you are satisfied with your organizational performance <u>over the past 12 months</u>** by circling the number of your choice:

Performance criteria		Degree of satisfaction with business performance				
		Not at all satisfied		Moderately satisfied		Very satisfied
1	Profitability	1	2	3	4	5
2	Sales turnover	1	2	3	4	5
3	Sales growth	1	2	3	4	5
4	Return on investment	1	2	3	4	5
5	Market share	1	2	3	4	5
6	Customer satisfaction	1	2	3	4	5
7	Customer retention	1	2	3	4	5
8	Relationship with suppliers	1	2	3	4	5
9	Business image	1	2	3	4	5
10	Workplace industrial relation	1	2	3	4	5
11	Work and life balance	1	2	3	4	5

b) Please indicate your organization's performance relative to that of your major competitors **<u>over the past 12 months</u>** according to each of the following criteria by circling the number of your choice:

		Significantly lower	Moderately lower	About the same	Moderately higher	Significantly higher
12	Return on sales	1	2	3	4	5
13	Cash flow	1	2	3	4	5
14	Net profit	1	2	3	4	5
15	Market share	1	2	3	4	5
16	Return on investment	1	2	3	4	5

c) Please circle one of the following responses to indicate your business's growth **<u>over the past 12 months</u>:**

		Decreasing	Holding its own	Increasing slightly	Increasing moderately	Increasing significantly
17	Changes in sales	1	2	3	4	5
18	Changes in market share	1	2	3	4	5
19	Changes in cash flow	1	2	3	4	5

SECTION F

The following questions ask for information concerning yourself and your organizational background. Please answer each question by ticking the appropriate box and fill-up the required information.

Please tick (/) in the appropriate box.

1. Gender ☐ Male ☐ Female

2. Age ☐ below 30 ☐ 31- 40 ☐ 41-50
   ☐ 51-60 ☐ 61 and above

3. Race ☐ Malay ☐ Chinese ☐ Indian
   ☐ Others, please specify: _____

4. Highest education level

   ☐ PhD ☐ Master ☐ Degree
   ☐ Diploma ☐ Secondary school ☐ Primary School
   ☐ Other, please specify: _____

5. Your position at this firm?

   ☐ Business owner ☐ Senior manager
   ☐ Business partner ☐ Human resource manager
   ☐ General manager ☐ Other, please specify: _____

6. If you are business owner or business partner, how long has your firm been established?

   ☐ Less than 5 years ☐ 16 – 20 years
   ☐ 5 - 10 years ☐ More than 20 years
   ☐ 11 – 15 years

7. If you are senior manager, general manager, human resource manager or other, how many years have you been working with the firm?

   ☐ Less than 5 years ☐ 16 – 20 years
   ☐ 5 - 10 years ☐ More than 20 years
   ☐ 11 – 15 years

8. Your firm is located in the state of _____

9. How many employees does your firm hire?

☐ Less than 5 employees ☐ 50 – 150 employees

☐ 5 - 49 employees ☐ More than 150 employees

10. Type of ownership:

☐ Local company, please tick: ☐ Bumiputera

☐ Non-Bumiputera

☐ Foreign company

☐ Joint local-foreign company

11. Please select the type of industry which most closely represents your organization's industry group. **(You may tick more than one answer)**

☐ Automotive & Component Parts

☐ Building Materials & Related Products

☐ Cement, Concrete Products, Ceramics & Tiles

☐ Chemicals, Chemical & Plastic Products

☐ Electrical & Electronics Products

☐ Food, Beverages and Tobacco

☐ Furniture & Wood Related Products

☐ Household Appliances

☐ Industrial & Engineering Products

☐ Iron & Steel Products

☐ Laboratory Equipment

☐ Packaging, Labeling & Printing

☐ Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household

☐ Rubber Products

☐ Stationary

☐ Textiles & Wearing Apparel

☐ Other, please specify:_____

End of Questions

THANK YOU VERY MUCH FOR YOUR KIND COOPERATION

Kepada Tuan/Puan Pemilik / Pengurus yang dihormati,

SATU TINJAUAN MENGENAI PRESTASI PERUSAHAAN KECIL DAN SEDERHANA (PKS) DI MALAYSIA

Menyedari bahawa masa depan Perusahaan Kecil dan Sederhana di Malaysia sangat bergantung kepada usaha pemilik syarikat, saya amat berminat untuk mengetahui pengalaman tuan/puan dalam menguruskan perniagaan, sebagai satu langkah positif untuk meningkatkan kecemerlangan perniagaan dalam sektor PKS di Malaysia. Secara khususnya, saya amat berminat untuk menkaji faktor-faktor penting yang boleh meningkatkan prestasi sesebuah syarikat. Saya yakin bahawa sumbangan pihak tuan/puan dapat dijadikan panduan bagi merealisasikan usaha-usaha positif dalam melahirkan PKS yang lebih berjaya di Malaysia.

Oleh itu, bagi mempamerkan keprihatinan tuan/puan terhadap usaha ini, saya berharap agar tuan/puan dapat melengkapkan borang soal-selidik ini dan kemudian memasukkan semula ke dalam sampul surat yang disediakan. Tiada jawapan yang dianggap betul atau salah, saya hanya berminat untuk mendapatkan pandangan tuan/puan. Semua maklumat yang pihak tuan/puan berikan adalah dianggap sulit dan hanya untuk tujuan akademik semata-mata. Penyertaan pihak tuan dalam melengkapkan soal selidik ini adalah sangat penting dan sangat kritikal untuk memastikan kejayaan kajian ini. Sekiranya pihak tuan/puan berminat dengan dapatan kajian ini, sila sertakan kad perniagaan dan alamat e-mel ke dalam sampul surat yang disediakan bagi membolehkan saya menghantar ringkasan keputusan yang diperolehi. Adalah satu penghormatan jika pihak tuan/puan sudi mengembalikan soal selidik yang lengkap sebelum atau pada_____.

Saya amat menghargai sekiranya pihak tuan/puan dapat mengembalikan soal selidik ini seawal yang mungkin. Terima kasih diucapkan terlebih dahulu atas kerjasama pihak tuan/puan. Sekiranya pihak tuan/puan mempunyai sebarang pertanyaan, sila hubungi saya di **012-4945554 / 04-9285058**.

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SEKSYEN A

Penyataan berikut terbaik menerangkan **persepsi pemilik/pengurus mengenai amalan pengurusan sumber manusia yang dilaksanakan oleh organisasi.** Sila bulatkan nombor pilihan anda mengikut skala yang diberikan.

Sangat Tidak Bersetuju				**Sangat Setuju**
1	**2**	**3**	**4**	**5**

1	Pekerja terlibat dalam pusingan kerja.	1	2	3	4	5
2	Pekerja diberi tanggungjawab untuk membuat keputusan.	1	2	3	4	5
3	Pekerjaan direkabentuk dalam lingkungan kemahiran dan keupayaan individu pekerja.	1	2	3	4	5
4	Proses pemilihan adalah menyeluruh (contohnya menggunakan temu bual, ujian, dan lain-lain)	1	2	3	4	5
5	Pemilihan menekankan keupayaan calon untuk bekerjasama dan bekerja dalam pasukan.	1	2	3	4	5
6	Pemilihan melibatkan saringan calon pekerja yang ramai.	1	2	3	4	5
7	Pemilihan memfokus kepada memilih calon terbaik, tanpa mengira jenis pekerjaan.	1	2	3	4	5
8	Pemilihan menekankan kenaikan pangkat dalaman.	1	2	3	4	5
9	Pemilihan mengutamakan calon yang berpotensi untuk belajar.	1	2	3	4	5
10	Latihan diberikan secara berterusan.	1	2	3	4	5
11	Program-program latihan adalah menyeluruh.	1	2	3	4	5
12	Program-program latihan berusaha ke arah membangunkan kemahiran dan pengetahuan khusus firma.	1	2	3	4	5
13	Program-program latihan menekankan pengalaman semasa bekerja.	1	2	3	4	5
14	Prestasi adalah berdasarkan objektif iaitu hasil kerja yang boleh diukur.	1	2	3	4	5
15	Penilaian prestasi merangkumi pengurusan berdasarkan objektif dengan penetapan matlamat bersama.	1	2	3	4	5
16	Penilaian prestasi merangkumi maklum balas untuk pembangunan kendiri pekerja.	1	2	3	4	5
17	Insentif adalah berdasarkan prestasi pasukan.	1	2	3	4	5
18	Pakej ganjaran termasuk pakej faedah yang pelbagai.	1	2	3	4	5
19	Ganjaran termasuk gaji yang tinggi.	1	2	3	4	5
20	Sistem insentif terikat kepada bayaran berasaskan kemahiran.	1	2	3	4	5
21	Ganjaran adalah bergantung kepada prestasi.	1	2	3	4	5
22	Maklumat organisasi dikongsi dengan pekerja.	1	2	3	4	5
23	Komunikasi terbuka dan telus digalakkan dalam kalangan pekerja.	1	2	3	4	5
24	Hari keluarga dianjurkan dari semasa ke semasa.	1	2	3	4	5
25	Persekitaran kerja yang menyokong aktiviti organisasi disediakan.	1	2	3	4	5
26	Sumbangan pekerja dihargai.	1	2	3	4	5
27	Keadilan diutamakan dalam amalan pengurusan.	1	2	3	4	5

SEKSYEN B

Penyataan berikut terbaik menerangkan **persepsi pemilik/pengurus terhadap pendekatan dalam membuat keputusan dan strategik keusahawanan yang digunakan oleh organisasi.** Sila bulatkan nombor pilihan anda mengikut skala yang diberikan.

Sangat Tidak Bersetuju						**Sangat Setuju**
1	**2**	**3**	**4**	**5**	**6**	**7**

Secara umumnya, firma saya menyokong…								
1	…penekanan yang kuat ke atas penyelidikan dan pembangunan, kepimpinan teknologi dan innovasi.	1	2	3	4	5	6	7
Berapa banyak barisan produk baru yang telah dipasarkan oleh firma anda dalam 3 tahun yang lalu?								
2	… barisan produk baru yang amat banyak.	1	2	3	4	5	6	7
3	… perubahan dalam barisan produk yang biasanya agak pantas.	1	2	3	4	5	6	7
Ketika berurusan dengan para pesaing, firma saya…								
4	… biasanya memulakan tindakan dahulu dan kemudian diikuti tindakbalas daripada pesaing	1	2	3	4	5	6	7
5	… sering menjadi firma pertama yang memperkenalkan produk, teknologi operasi, teknik pentadbiran yang baru, dll.	1	2	3	4	5	6	7
6	… biasanya menyesuaikan diri dengan sebarang persaingan dan lebih bersikap ‘menggagalkan para pesaing’.	1	2	3	4	5	6	7
Secara umumnya, firma saya mempunyai…								
7	... kecenderungan yang kuat untuk melibatkan diri dalam projek-projek berisiko tinggi (dengan peluang pulangan yang sangat tinggi).	1	2	3	4	5	6	7
Secara umumnya, firma saya percaya bahawa…								
8	… disebabkan oleh keadaan persekitaran, tindakan yang berani, pelbagai dan menyeluruh adalah perlu untuk mencapai objektif firma.	1	2	3	4	5	6	7
Apabila berhadapan dengan situasi pembuatan keputusan yang melibatkan ketidakpastian, firma saya…								
9	… biasanya bertindak dengan berani, agresif bagi memaksimumkan kebarangkalian menggunakan sebaik mungkin peluang-peluang yang berpotensi.	1	2	3	4	5	6	7

SEKSYEN C

Penyataan berikut terbaik menerangkan **persepsi pemilik/pengurus terhadap keupayaan firma untuk berinovasi.** Sila bulatkan nombor pilihan anda mengikut skala yang diberikan.

Sangat Tidak Bersetuju					**Sangat Setuju**
1	**2**	**3**	**4**	**5**	**6**

1	Mengubah sikap pekerja (contohnya melalui latihan, kempen kesedaran mengenai visi/matlamat syarikat, pengurusan kualiti, kerja berpasukan dan lain-lain).	1	2	3	4	5	6
2	Mengubah amalan kerja (contohnya mengupah buruh asing, lebih memfokus kepada modal, lebih pekerja mahir, lebih pengagihan tugas dan lain-lain).	1	2	3	4	5	6
3	Mengubah amalan hubungan manusia (contohnya melalui perjanjian kerjasama, konsep pintu terbuka, program cadangan pekerja).	1	2	3	4	5	6
4	Memberi ganjaran kepada individu yang menyumbang idea-idea baru.	1	2	3	4	5	6
5	Mengamalkan amalan kualiti yang baik (contohnya *ISO, Good Manufacturing Practice (GMP), Total Quality Management*, Kumpulan Kualiti, Pusingan Kerja/ Kemahiran yang pelbagai, Prestasi berasaskan bayaran).	1	2	3	4	5	6
6	Memperkenalkan kepelbagaian produk baru.	1	2	3	4	5	6
7	Memperkenalkan produk yang diubahsuai.	1	2	3	4	5	6
8	Meningkatkan kualiti produk.	1	2	3	4	5	6
9	Berupaya menjual produk kepada segmen pasaran domestik yang baru.	1	2	3	4	5	6
10	Berupaya menjual produk kepada segmen pasaran eksport yang baru.	1	2	3	4	5	6
11	Menggunakan strategi-strategi baru (contohnya *ICT*) untuk mempromosi atau mengiklankan produk.	1	2	3	4	5	6
12	Menggunakan cara-cara baru untuk membiayai perniagaan (contohnya pembiayaan kredit eksport/pembiayaan semula, usahasama, modal teroka, dan lain-lain).	1	2	3	4	5	6
13	Mengubah struktur organisasi (contohnya mewujudkan jabatan baru, menambah jawatan tertinggi/pengurus, mewujudkan pasukan/kumpulan khas dan lain-lain).	1	2	3	4	5	6
14	Menggunakan peralatan/peranti terkini untuk memproses produk-produk.	1	2	3	4	5	6
15	Menggunakan perisian/perkakasan terkini dalam pentadbiran atau pengurusan (contohnya perakaunan, personel, sumber, pembelian dan pembekalan).	1	2	3	4	5	6

SEKSYEN D

Penyataan berikut terbaik menerangkan **persepsi pemilik/pengurus mengenai setakat mana mereka telah menggunakan jaringan sosial dalam tempoh tiga tahun yang lepas dengan pengurus di firma-firma lain dan pegawai-pegawai kerajaan.** Sila bulatkan nombor pilihan anda mengikut skala yang diberikan.

Sangat Sedikit						**Sangat Meluas**
1	**2**	**3**	**4**	**5**	**6**	**7**

1	Firma saya telah menggunakan jaringan sosial dengan pembeli/pelanggan.	1	2	3	4	5	6	7
2	Firma saya telah menggunakan jaringan sosial dengan pembekal-pembekal.	1	2	3	4	5	6	7
3	Firma saya telah menggunakan jaringan sosial dengan pengedar-pengedar.	1	2	3	4	5	6	7
4	Firma saya telah menggunakan jaringan sosial dengan pegawai-pegawai kerajaan yang berkaitan (contohnya FAMA, MARA, MIDA, atau lain-lain).	1	2	3	4	5	6	7
5	Firma saya telah menggunakan jaringan sosial dengan institusi sokongan PKS (contohnya SME Corp, MITI, MATRADE, atau lain-lain)	1	2	3	4	5	6	7
6	Firma saya telah menggunakan jaringan sosial dengan institusi kewangan (contohnya SME Bank, Bank Pembangunan, Agro Bank atau lain-lain institusi kewangan).	1	2	3	4	5	6	7

SEKSYEN E

Merujuk kepada pencapaian organisasi anda sepanjang tempoh **12 bulan yang lepas,**

d) Sila nyatakan **sejauh mana anda berpuas hati dengan pencapaian organisasi anda** dalam tempoh **12 bulan yang lepas** dengan membulatkan nombor pilihan anda.

Kriteria Prestasi		**Tahap kepuasan anda terhadap pencapaian perniagaan**				
		Sangat tidak berpuashati		**Agak berpuashati**		**Sangat berpuas hati**
1	Keuntungan	1	2	3	4	5
2	Kadar pulangan jualan	1	2	3	4	5
3	Pertumbuhan jualan	1	2	3	4	5
4	Pulangan ke atas pelaburan	1	2	3	4	5
5	Penguasaan pasaran	1	2	3	4	5
6	Kepuasan pelanggan	1	2	3	4	5
7	Mengekalkan pelanggan	1	2	3	4	5
8	Hubungan dengan pembekal	1	2	3	4	5
9	Imej perniagaan	1	2	3	4	5
10	Perhubungan industri di tempat kerja	1	2	3	4	5
11	Keseimbangan antara kerja dan kehidupan	1	2	3	4	5

e) Sila nyatakan pencapaian organisasi anda jika dibandingkan dengan pesaing utama anda untuk tempoh **12 bulan yang lepas** berpandukan kepada kriteria-kriteria berikut dengan membulatkan nombor pilihan anda.

		Sangat rendah	**Agak rendah**	**Hampir sama**	**Agak tinggi**	**Sangat tinggi**
12	Pulangan terhadap jualan	1	2	3	4	5
13	Aliran tunai	1	2	3	4	5
14	Keuntungan bersih	1	2	3	4	5
15	Penguasaan pasaran	1	2	3	4	5
16	Pulangan terhadap pelaburan	1	2	3	4	5

f) Sila bulatkan salah satu daripada nombor pilihan anda yang boleh menjadi petunjuk terhadap perkembangan perniagaan anda dalam tempoh **12 bulan yang lepas**.

		Berkurangan	**Tiada perbezaan**	**Peningkatan tipis**	**Peningkatan sederhana**	**Peningkatan yang tinggi**
17	Perubahan dalam jualan	1	2	3	4	5
18	Perubahan dalam penguasaan pasaran	1	2	3	4	5
19	Perubahan dalam aliran tunai	1	2	3	4	5

SEKSYEN F

Soalan-soalan berikut adalah mengenai maklumat diri anda dan latar belakang organisasi anda. Sila jawab setiap soalan dengan menanda pada kotak yang sesuai dan mengisi maklumat yang diperlukan.

Sila tandakan "/" dalam kotak yang berkaitan.

1. Jantina ☐ Lelaki ☐ Wanita

2. Umur ☐ bawah 30 ☐ 31- 40 ☐ 41-50
☐ 51-60 ☐ 61 dan ke atas

3. Bangsa ☐ Melayu ☐ Cina
☐ India
☐ Lain-lain, sila nyatakan _____

4. Tahap pendidikan tertinggi

☐ PhD ☐ Sarjana ☐ Ijazah
☐ Diploma ☐ Sekolah Menengah
☐ Sekolah Rendah ☐ Lain-lain, sila nyatakan_____

5. Jawatan anda di firma ini?

☐ Pemilik perniagaan ☐ Pengurus kanan
☐ Rakan kongsi perniagaan ☐ Pengurus sumber manusia
☐ Pengurus am ☐ Lain-lain, sila nyatakan_____

6. Jika anda pemilik atau rakan kongsi perniagaan, berapa lama firma ini telah ditubuhkan?

☐ Kurang dari 5 tahun ☐ 16 - 20 tahun
☐ 5 – 10 tahun ☐ lebih dari 20 tahun
☐ 11 – 15 tahun

8. Jika anda pengurus kanan, pengurus am, pengurus sumber manusia atau lain-lain, berapa lama anda bekerja di firma ini?

☐ Kurang dari 5 tahun ☐ 16 - 20 tahun
☐ 5 – 10 tahun ☐ lebih dari 20 tahun
☐ 11 – 15 tahun

7. Firma anda terletak di negeri : _____

9. Berapa ramai pekerja dalam firma ini?

- ☐ Kurang dari 5 orang pekerja
- ☐ 5 - 49 orang pekerja
- ☐ 50 – 150 orang pekerja
- ☐ Lebih dari 150 orang pekerja

10. Jenis pemilikan

- ☐ Syarikat tempatan, sila tandakan:
  - ☐ Bumiputera
  - ☐ Bukan Bumiputera
- ☐ Syarikat asing
- ☐ Syarikat usahasama tempatan-asing

11. Sila pilih jenis industri yang paling hampir mewakili kumpulan industri organisasi anda. **(Anda boleh tandakan lebih daripada satu jawapan)**

- ☐ Automotif & Bahagian Komponen
- ☐ Bahagian Binaan & Produk-Produk Berkaitan
- ☐ Simen, Produk Konkrit, Siramik & Jubin
- ☐ Bahan kimia, Produk plastik & bahan kimia
- ☐ Elektrik & Produk Elektronik
- ☐ Makanan, Minuman & Tembakau
- ☐ Perabot & Produk berkaiatan Kayu
- ☐ Perkakasan Isirumah
- ☐ Produk perindustrian & kejuruteraan
- ☐ Besi & Produk Keluli
- ☐ Peralatan Makmal
- ☐ Pembungkusan, Pelabelan & Pencetakan
- ☐ Farmasi, Peralatan Hospital, Kosmetik, Peralatan Mandian dan Isirumah
- ☐ Produk getah
- ☐ Alat tulis
- ☐ Tekstil dan pakaian
- ☐ Lain-lain, sila nyatakan_____

Soalan Tamat
TERIMA KASIH ATAS KERJASAMA ANDA

APPENDIX B

Descriptive Statistics for Demographic Variables

Gender1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 male	214	66.7	66.7	66.7
	2 female	107	33.3	33.3	100.0
	Total	321	100.0	100.0	

Age2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 below 30	38	11.8	11.9	11.9
	2 31-40	145	45.2	45.5	57.4
	3 41-50	100	31.2	31.3	88.7
	4 51-60	34	10.6	10.7	99.4
	5 61 and above	2	.6	.6	100.0
	Total	319	99.4	100.0	
Missing	System	2	.6		
Total		321	100.0		

Race3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 malay	126	39.3	40.1	40.1
	2 chinese	150	46.7	47.8	87.9
	3 indian	37	11.5	11.8	99.7
	4 others	1	.3	.3	100.0
	Total	314	97.8	100.0	
Missing	System	7	2.2		
Total		321	100.0		

Race_other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Sikh	1	.3	100.0	100.0
Missing	System	320	99.7		
Total		321	100.0		

Education4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 master	12	3.7	3.7	3.7
	3 degree	123	38.3	38.3	42.1
	4 diploma	133	41.4	41.4	83.5
	5 secondary school	49	15.3	15.3	98.8
	6 primary school	2	.6	.6	99.4
	7 others	2	.6	.6	100.0
	Total	321	100.0	100.0	

Edu_other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Sijil kemahiran	2	.6	100.0	100.0
Missing	System	319	99.4		
Total		321	100.0		

Position5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 business owner	66	20.6	20.6	20.6
	2 business partner	37	11.5	11.6	32.2
	3 general manager	32	10.0	10.0	42.2
	4 senior manager	65	20.2	20.3	62.5
	5 human resource manager	101	31.5	31.6	94.1
	6 others	19	5.9	5.9	100.0
	Total	320	99.7	100.0	
Missing	System	1	.3		
Total		321	100.0		

Position_other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 blank	1	.3	5.6	5.6
	2 business develeopment manager	1	.3	5.6	11.1
	3 pengurus QC	1	.3	5.6	16.7
	4 food technologist	1	.3	5.6	22.2
	5 marketing manager	4	1.2	22.2	44.4
	6 sale manager	5	1.6	27.8	72.2
	7 finance manager	2	.6	11.1	83.3
	8 logistic manager	1	.3	5.6	88.9
	9 procument manager	1	.3	5.6	94.4
	10 trainee manager	1	.3	5.6	100.0
	Total	18	5.6	100.0	
Missing	System	303	94.4		
Total		321	100.0		

Tenure6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 less than 5 years	81	25.2	26.5	26.5
	2 5-10 years	112	34.9	36.6	63.1
	3 11-15 years	53	16.5	17.3	80.4
	4 16-20 years	49	15.3	16.0	96.4
	5 more than 20 years	11	3.4	3.6	100.0
	Total	306	95.3	100.0	
Missing	System	15	4.7		
Total		321	100.0		

Firmage7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 less than 5 years	19	5.9	5.9	5.9
	2 5-10 years	60	18.7	18.7	24.6
	3 11-15 years	77	24.0	24.0	48.6
	4 16-20 years	140	43.6	43.6	92.2
	5 more than 20 years	25	7.8	7.8	100.0
	Total	321	100.0	100.0	

firm location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Johor	44	13.7	13.7	13.7
	Kedah	51	15.9	15.9	29.6
	Melaka	6	1.9	1.9	31.5
	Negeri Sembilan	7	2.2	2.2	33.6
	Pulau Pinang	59	18.4	18.4	52.0
	Perak	9	2.8	2.8	54.8
	Selangor	78	24.3	24.3	79.1
	WP KL	67	20.9	20.9	100.0
	Total	321	100.0	100.0	

Employee9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 5-49 employees	100	31.2	31.2	31.2
	2 50-150 employees	221	68.8	68.8	100.0
	Total	321	100.0	100.0	

Ownership10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 local company	295	91.9	92.5	92.5
	3 joint local-foreign company	24	7.5	7.5	100.0
	Total	319	99.4	100.0	
Missing	System	2	.6		
Total		321	100.0		

If_local_co

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Bumiputera	239	74.5	82.7	82.7
	2 Non-Bumiputera	50	15.6	17.3	100.0
	Total	289	90.0	100.0	
Missing	System	32	10.0		
Total		321	100.0		

Industry11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Automotive & Component Parts	26	8.1	8.1	8.1
	2 Building Materials & Related Products	18	5.6	5.6	13.8
	3 Cement, Concrete Products, Ceramics & Tiles	10	3.1	3.1	16.9
	4 Chemicals, Chemical & Plastic Products	35	10.9	10.9	27.8
	5 Electrical & Electronics Products	35	10.9	10.9	38.8
	6 Food, Beverages and Tobacco	64	19.9	20.0	58.8
	7 Furniture & Wood Related Products	15	4.7	4.7	63.4

	8 Household Appliances	8	2.5	2.5	65.9
	9 Industrial & Engineering Products	21	6.5	6.6	72.5
	10 Iron & Steel Products	15	4.7	4.7	77.2
	11 Laboratory Equipment	1	.3	.3	77.5
	12 Packaging, Labeling & Printing	29	9.0	9.1	86.6
	13 Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household	12	3.7	3.8	90.3
	14 Rubber Products	6	1.9	1.9	92.2
	15 Stationary	6	1.9	1.9	94.1
	16 Textiles & Wearing Apparel	15	4.7	4.7	98.8
	17 others	4	1.2	1.3	100.0
	Total	320	99.7	100.0	
Missing	System	1	.3		
Total		321	100.0		

Industry_tam1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Building Materials & Related Products	2	.6	1.8	1.8
	3 Cement, Concrete Products, Ceramics & Tiles	8	2.5	7.3	9.1
	4 Chemicals, Chemical & Plastic Products	2	.6	1.8	10.9
	5 Electrical & Electronics Products	9	2.8	8.2	19.1

	6 Food, Beverages and Tobacco	3	.9	2.7	21.8
	7 Furniture & Wood Related Products	1	.3	.9	22.7
	8 Household Appliances	12	3.7	10.9	33.6
	9 Industrial & Engineering Products	12	3.7	10.9	44.5
	10 Iron & Steel Products	5	1.6	4.5	49.1
	11 Laboratory Equipment	8	2.5	7.3	56.4
	12 Packaging, Labeling & Printing	22	6.9	20.0	76.4
	13 Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household	7	2.2	6.4	82.7
	14 Rubber Products	3	.9	2.7	85.5
	15 Stationary	9	2.8	8.2	93.6
	16 Textiles & Wearing Apparel	7	2.2	6.4	100.0
	Total	110	34.3	100.0	
Missing	System	211	65.7		
Total		321	100.0		

Industry_tam2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 Cement, Concrete Products, Ceramics & Tiles	1	.3	2.8	2.8
	4 Chemicals, Chemical & Plastic Products	2	.6	5.6	8.3
	8 Household Appliances	2	.6	5.6	13.9

	9 Industrial & Engineering Products	5	1.6	13.9	27.8
	11 Laboratory Equipment	5	1.6	13.9	41.7
	12 Packaging, Labeling & Printing	13	4.0	36.1	77.8
	13 Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household	1	.3	2.8	80.6
	14 Rubber Products	2	.6	5.6	86.1
	15 Stationary	3	.9	8.3	94.4
	16 Textiles & Wearing Apparel	2	.6	5.6	100.0
	Total	36	11.2	100.0	
Missing	System	285	88.8		
Total		321	100.0		

Industry_tam3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8 Household Appliances	1	.3	9.1	9.1
	9 Industrial & Engineering Products	1	.3	9.1	18.2
	12 Packaging, Labeling & Printing	2	.6	18.2	36.4
	13 Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household	2	.6	18.2	54.5
	14 Rubber Products	3	.9	27.3	81.8
	15 Stationary	1	.3	9.1	90.9
	16 Textiles & Wearing Apparel	1	.3	9.1	100.0
	Total	11	3.4	100.0	
Missing	System	310	96.6		
Total		321	100.0		

Industry_other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 gas memasak	1	.3	14.3	14.3
	2 marine	1	.3	14.3	28.6
	3 ais tiub	1	.3	14.3	42.9
	4 perabot berasaskan logam	2	.6	28.6	71.4
	5 perkhidmatan pengangkutan	1	.3	14.3	85.7
	6 IT component	1	.3	14.3	100.0
	Total	7	2.2	100.0	
Missing	System	314	97.8		
Total		321	100.0		

APPENDIX C
Test of Harman's Single Factor

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.187	23.930	23.930	18.187	23.930	23.930
2	8.420	11.079	35.009			
3	4.995	6.572	41.581			
4	3.766	4.956	46.536			
5	2.762	3.635	50.171			
6	2.456	3.232	53.403			
7	2.012	2.647	56.050			
8	1.875	2.467	58.516			
9	1.711	2.252	60.768			
10	1.545	2.033	62.801			
11	1.447	1.904	64.705			
12	1.366	1.797	66.503			
13	1.275	1.677	68.180			
14	1.099	1.446	69.626			
15	1.092	1.437	71.063			
16	1.042	1.370	72.433			
17	.973	1.280	73.714			
18	.908	1.195	74.909			
19	.899	1.182	76.091			
20	.812	1.069	77.160			
21	.783	1.030	78.190			
22	.732	.963	79.153			
23	.713	.938	80.091			
24	.696	.916	81.006			
25	.656	.863	81.870			
26	.625	.822	82.692			
27	.565	.743	83.435			
28	.546	.718	84.153			
29	.538	.708	84.861			
30	.526	.692	85.554			
31	.508	.668	86.222			
32	.486	.640	86.861			
33	.464	.611	87.473			
34	.450	.592	88.065			
35	.436	.573	88.638			
36	.416	.547	89.185			

37	.411	.540	89.726			
38	.391	.515	90.241			
39	.381	.502	90.742			
40	.372	.490	91.232			
41	.338	.445	91.677			
42	.329	.433	92.110			
43	.318	.419	92.529			
44	.313	.412	92.940			
45	.297	.391	93.332			
46	.295	.388	93.720			
47	.274	.361	94.081			
48	.259	.341	94.421			
49	.252	.331	94.753			
50	.241	.317	95.070			
51	.231	.303	95.373			
52	.224	.295	95.668			
53	.211	.278	95.946			
54	.207	.273	96.219			
55	.204	.269	96.487			
56	.202	.266	96.754			
57	.187	.246	97.000			
58	.176	.231	97.231			
59	.170	.224	97.456			
60	.159	.209	97.664			
61	.155	.205	97.869			
62	.152	.200	98.069			
63	.146	.192	98.260			
64	.137	.180	98.440			
65	.130	.171	98.611			
66	.128	.168	98.779			
67	.121	.159	98.938			
68	.119	.156	99.095			
69	.110	.145	99.240			
70	.106	.140	99.380			
71	.101	.133	99.512			
72	.095	.125	99.637			
73	.083	.110	99.747			
74	.074	.098	99.845			
75	.066	.087	99.932			
76	.052	.068	100.000			

Extraction Method: Principal Component Analysis.

APPENDIX D

Test of Multi-collinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.004	.003		-1.357	.176		
	MTG	.509	.000	.624	1092.630	0.000	.760	1.315
	MTM	.492	.001	.534	934.588	0.000	.760	1.315

a. Dependent Variable: MT

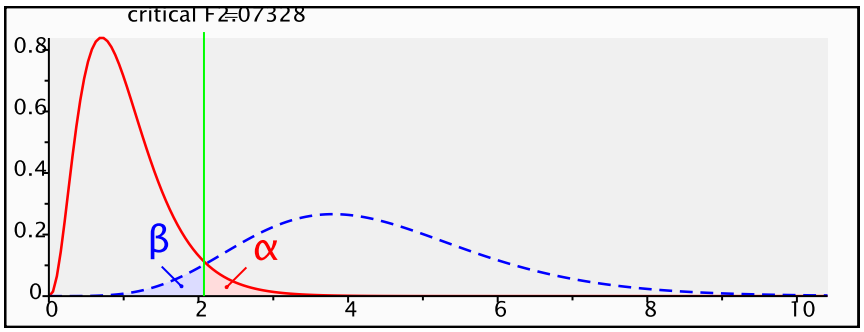
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.010	.004		-2.564	.011		
	OPBG	.122	.001	.248	177.571	0.000	.483	2.072
	OPRC	.304	.001	.347	216.039	0.000	.366	2.735
	OPSF	.328	.002	.346	211.698	0.000	.352	2.842
	OPSNF	.247	.001	.267	236.337	0.000	.736	1.360

a. Dependent Variable: OP

APPENDIX E

Output of G*Power

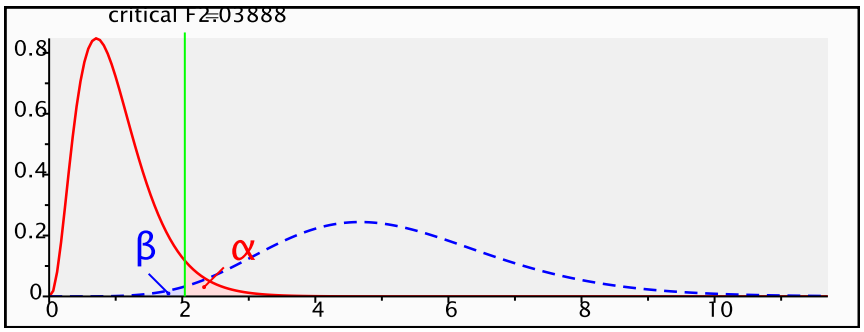


F tests – Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis:	A priori: Compute required sample size		
Input:	Effect size f^2	=	0.15
	α err prob	=	0.05
	Power (1−β err prob)	=	0.95
	Number of predictors	=	7
Output:	Noncentrality parameter λ	=	22.9500000
	Critical F	=	2.0732820
	Numerator df	=	7
	Denominator df	=	145
	Total sample size	=	**153**
	Actual power	=	**0.9503254**

APPENDIX F

Output of G*Power



F tests – Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis:	Post hoc: Compute achieved power		
Input:	Effect size f^2	=	0.09
	α err prob	=	0.05
	Total sample size	=	**321**
	Number of predictors	=	7
Output:	Noncentrality parameter λ	=	28.8900000
	Critical F	=	2.0388819
	Numerator df	=	7
	Denominator df	=	313
	Power (1−β err prob)	=	**0.9874371**